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In cooperation with
United States Department
of the Interior, Bureau of
Land Management, and
University of Nevada,
Agricultural Experiment
Station

Soil Survey of Western White Pine County Area, Nevada, Parts of White Pine and Eureka Counties

Volume 1

How to Use This Soil Survey

General Soil Map

The general soil map, which is the color map preceding the detailed soil maps, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

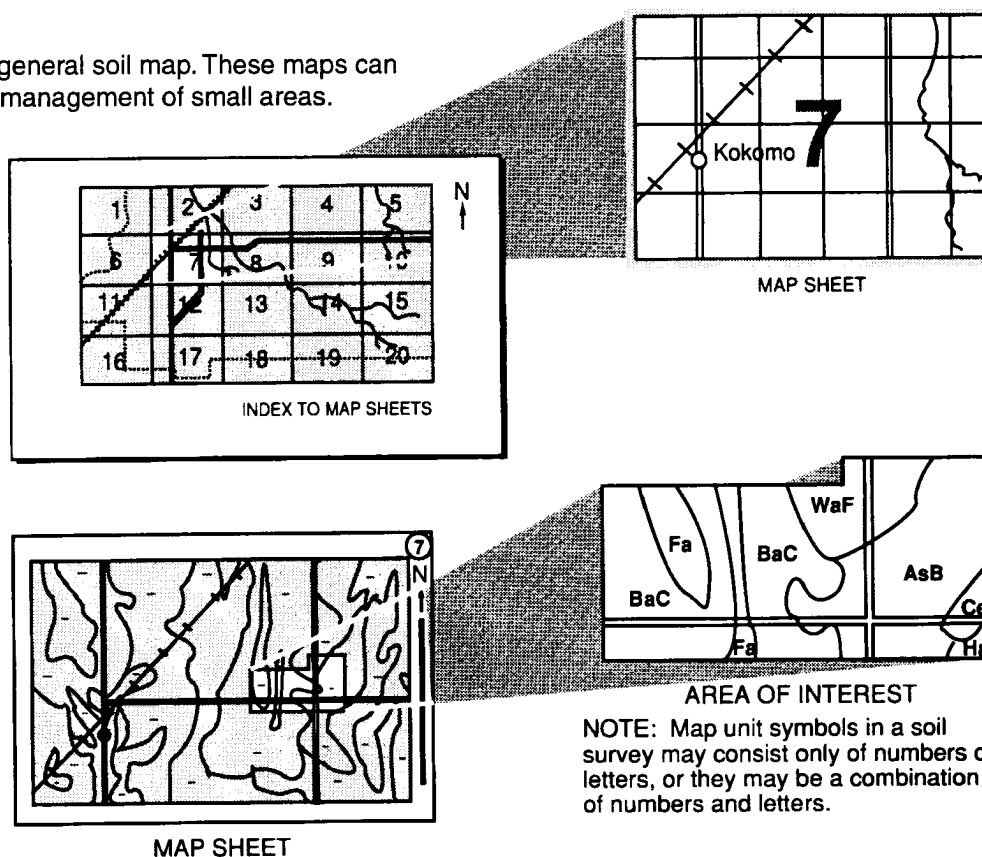
Detailed Soil Maps

The detailed soil maps follow the general soil map. These maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**, which precedes the soil maps. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map units symbols that are in that area. Turn to the **Index to Map Units** (see Contents), which lists the map units by symbol and name and shows the page where each map unit is described.

The **Summary of Tables** shows which table has data on a specific land use for each detailed soil map unit. See **Contents** for sections of this publication that may address your specific needs.



This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1988. Soil names and descriptions were approved in 1990. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1988. This survey was made cooperatively by the Natural Resources Conservation Service; the United States Department of the Interior, Bureau of Land Management; and the University of Nevada, Agricultural Experiment Station. It is part of the technical assistance furnished to the White Pine Soil Conservation District.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

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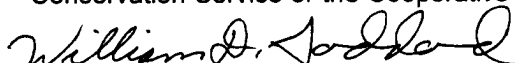
Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.



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Soil Survey of Western White Pine County Area, Nevada Parts of White Pine and Eureka Counties

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United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with
United States Department of the Interior, Bureau of Land Management,
and University of Nevada, Agricultural Experiment Station

This survey area is in the northeastern part of Nevada (fig. 1). It has a total of 3,236,272 acres. The towns of Ely, McGill, Lund, Ruth, Preston, and Cherry Creek are in the survey area. The area is sparsely populated.

The survey area is bordered on the west by the Eureka County Area, Nevada, and the Diamond Valley Area, Nevada, soil survey areas, near the west boundary of White Pine County; on the north by Elko County; and on the south by Lincoln County. The part of White Pine County east of west longitude 115 degrees, 7 minutes, 30 seconds is included in the White Pine County, Nevada, East Part, soil survey area. The Humboldt National Forest is excluded from Western White Pine County Area.

This survey area, which is in the Basin and Range Province, exhibits sharp contrasts in physiography. It has nearly level valleys that are 5,200 to 6,700 feet above sea level and are separated by north-south trending, rugged mountains that attain average crest-line heights of 9,000 feet. Mount Grafton, in the Schell Creek Range, is the highest point in the survey area. It reaches an elevation of 10,993 feet.

The important physiographic units in the survey area include parts of the Pancake, White Pine, Egan, Schell, Bald, Buck, Butte, and Cherry Creek Mountains; the Maverick Springs Range; and the Long, Newark, Huntington, Steptoe, Butte, Smith, Jakes, Railroad, and White River Valleys.

The public land in the survey area is administered by the Bureau of Land Management.

The descriptions, names, and delineations of the soils in this survey area do not fully agree with those of the soils in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, and variations in the intensity of mapping or in the extent of soils within the survey areas.

General Nature of the Survey Area

This section gives general information about the survey area. It describes history, water supply, industries and transportation facilities, drainage, soil landscapes, geology, and climate.

History

The original inhabitants of the survey area were the Shoshone Indians. Smith, Fremont, Simpson, Egan, and other early explorers made pioneering expeditions through the area. The riders of the Pony Express and the drivers of the Overland stages followed a route that closely approximates the present-day Lincoln Highway, the first transcontinental highway connecting the East and the West. Fort Ruby, which was built to protect Pony Express riders, was likely the first settlement in the western part of White Pine County.

The development of western White Pine County followed the discovery of precious metals. Gold was first discovered in Egan canyon by soldiers from nearby Fort

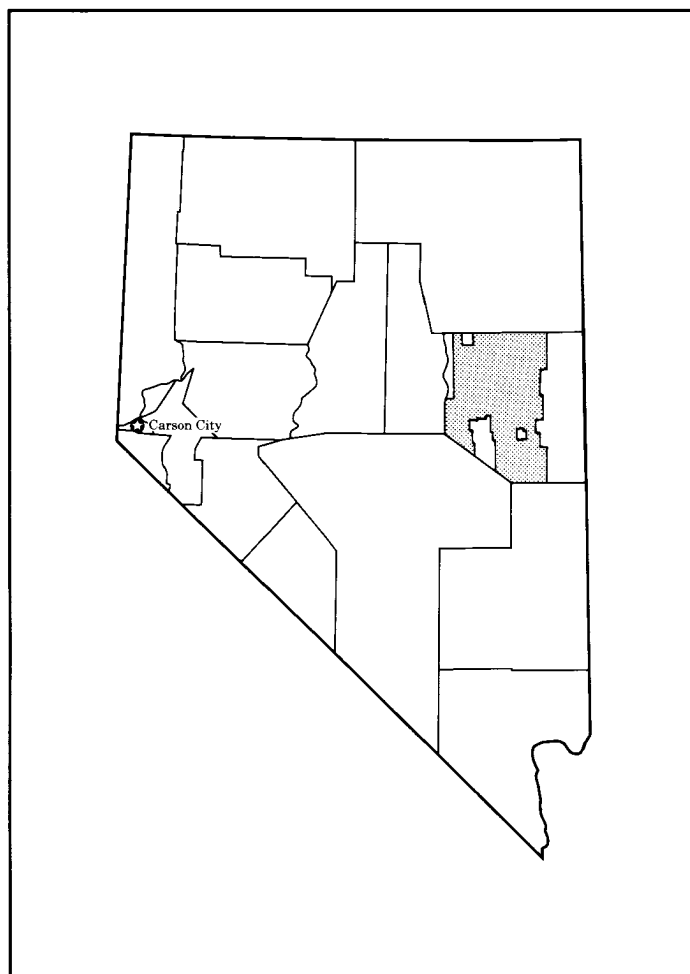


Figure 1.—Location of Western White Pine County Area in Nevada.

Schellbourne. The first ore-treatment plant in Nevada was built in Egan canyon. In January 1868, the silver deposits of Treasure Hill were discovered at Hamilton. Rich deposits of precious metals were discovered at Cherry Creek, Ward, Taylor, and other parts of the survey area. New camps rose to fame and then fell into obscurity. Some of the richest deposits are again being mined because of current prices for gold and silver.

The cattle industry began in 1860, when herds of Texas longhorns were trailed to the survey area to graze the lush and abundant grasses in the valleys. The McGill Company, Riordan Ranches, and Withington Land and Cattle are some of the oldest brands recorded in the State of Nevada. Cattle and sheep production is second only to mining in economic importance in the survey area.

In 1906, the Northern Nevada Railroad installed tracks that extended down the Steptoe Valley to Ely and connected with tracks of the Central Pacific Railroad. In later years the Southern Pacific Railroad absorbed the Central Pacific Railroad.

Water Supply

The major sources of irrigation water in the survey area are the White River, Steptoe Creek, Duck Creek, Ball Creek, Fish Creek, and numerous springs and wells. About 4,000 acres in the Preston-Lund area is irrigated primarily from two large springs, one north of Preston and the other directly south of Lund. The White River provides additional water in early spring, and late-season water is supplemented by individual irrigation wells. At the higher elevations, many small springs, seeps, and perennial streams provide adequate water for livestock and wildlife. Wells provide most of the water in the valleys. The quality of ground water in the valleys varies considerably, and the amount that is available for irrigation has not been determined.

In rural areas water for household use is obtained from drilled wells or from dependable springs.

Industries and Transportation Facilities

The main industries in the survey area are mining and ranching. Mining has been revived in Hamilton, Egan, Lane City, Robinson, Ward, and other old camps. The mining is through the cyanide leach process.

The ranches in the survey area are mainly cow-calf operations. The current year's crop is generally sold in fall and exported. A few flocks of sheep are in the area. Some areas are used for hay and pasture.

Pinyon-juniper woodlands in the survey area have been used for the commercial production of particle board. In the past they were used in making charcoal. The Ward Charcoal Ovens stand as reminders of the early production of smelters that operated in the survey area in the late 1800's.

The Nevada Northern Railroad, which once served the survey area, is now inactive. Three paved highways traverse the survey area. These are U.S. Highway 50, which is the Lincoln Highway; U.S. Highway 6, which is the Midland Trail; and U.S. Highway 93. A paved road built by a mining company extends from U.S. Highway 50 north through Long Valley. A paved road also runs through Newark Valley. The survey area has some improved graveled roads. Because of the sparse population, there is little need for additional paved roads. In summer and fall, most of the survey area is accessible by dirt roads or jeep trails.

Drainage

This survey area is drained mainly into alkali sinks in closed basins. The White River drains the south-central part of the area into the Sunnyside historic site and can be traced all the way to the Overton Arm of Lake Mead.

Soil Landscapes

In this survey the mapped areas generally represent associations of two or three soil components and other included soils of limited extent. Soil patterns commonly coincide with landforms and physiographic positions. In the section "Detailed Soil Map Units," descriptive terms are used to identify the location of individual soil components on the landscape. While there are relationships between the landforms and the soils, these relationships are not mutually exclusive. Individual soil series commonly occur on more than one component landform.

In this survey area the landforms are classified and defined according to Peterson (5). The landform elements are described in a manner precise enough to indicate where soils occur in relation to each other. The intent of this section is not to define all of the landform terms but to define briefly the main geomorphic surfaces in the survey area. All landform terms are defined in the Glossary.

The landforms of the intermontane basins are first grouped into two general classes—bolson (fig. 2) and

semibolson (fig. 3). Within these two groups, three major physiographic parts are identified in the Basin and Range Province (fig. 4). These are the bounding mountains, the piedmont slope, and the basin floor. The bounding mountains rise more than 1,000 feet above the surrounding boundaries. The piedmont slope and the basin floor are topographic forms that slope from the bounding mountains down to a central playa for bolson landforms and to a flood plain for semibolson landforms.

The shapes, genetic relationships, and geographic scales of the topography observed in the field are used to classify the landforms. The bolson and semibolson classes are successively divided into smaller and genetically more homogeneous classes (charts 1 and 2). The broadest class is major physiographic parts, each of which is made up of several genetically related major landforms. These landforms in turn may consist of several genetically related component landforms. The component landforms are about the smallest single units that one would consider in combined terms of their form, constituent materials, and genetic history.

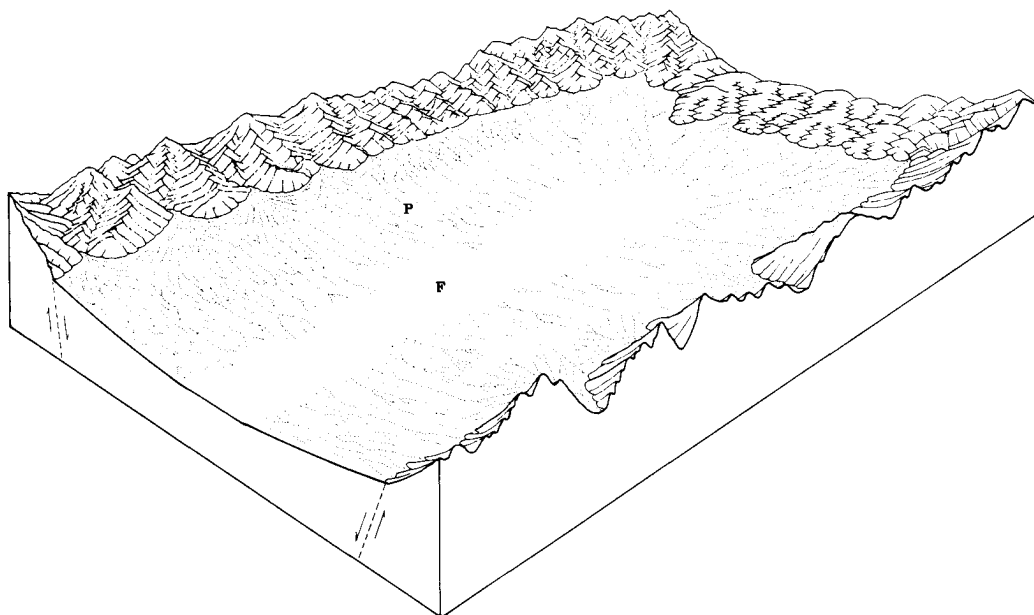


Figure 2.—The major physiographic parts of an internally drained intermontane basin, or bolson: the piedmont slope (P) and the basin floor, or, more specifically, the bolson floor (F). This drawing shows part of an elongated bolson that has bounding mountain ranges on the near and far sides and is cut off by hills on the far end. The drainageways, shown by dotted lines, suggest positions of major landforms. Neither the playas nor the drainageways on the floor are shown.

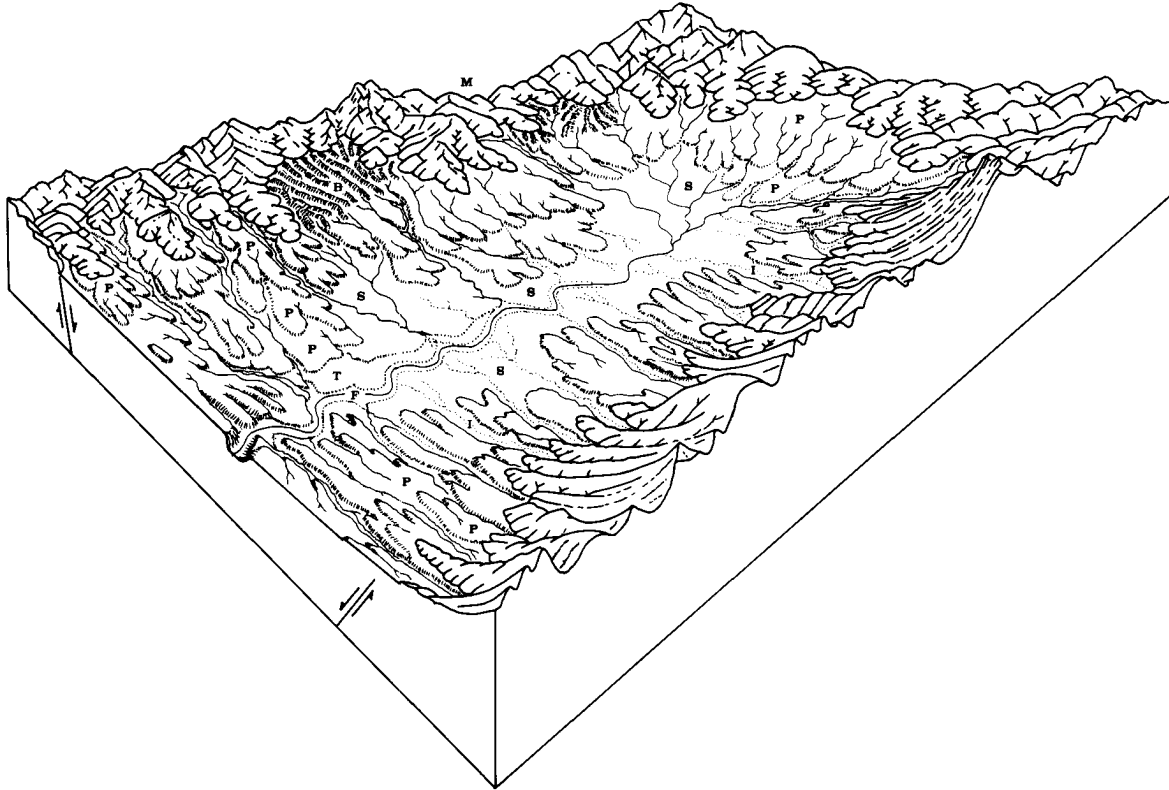


Figure 3.—A semibolsion that displays the effects of several cycles of dissection and deposition. The major landforms are ballenas (B); fan piedmonts (P), comprising several levels, or ages, of fan remnants; fan skirts (S); an axial-stream terrace (T); and an axial-stream flood plain (F). Alluvial fans are not distinguished from fan piedmonts. Component landforms of inset fans (I) are between fan remnants. The basin is bounded on two sides by mountains (M).

Some component landforms, such as fan piedmont remnants, have distinctive topographic parts with quite different geomorphic histories. These parts are called landform elements. The landform elements that are erosional surfaces are subdivided into slope components.

In the section "General Soil Map Units," landscape positions are given for each component. These generally are major physiographic parts, major landforms, or component landforms. In the section "Detailed Soil Map Units," broad landscape positions are specified for each map unit. These positions apply to the entire unit. They are major physiographic parts or major landforms. More detailed landscape positions are given for each major component and contrasting inclusion in the map unit. These are generally component landforms, landform elements, or slope components.

Geology

From the Late Precambrian Era until at least the Early Triassic Period, the survey area was part of the Cordilleran Miogeosyncline, in which tens of thousands of feet of strata accumulated (3). The lower strata consisted mainly of quartzite, and the upper strata consisted mainly of limestone and dolomite. Other important rocks in the survey area are Tertiary volcanic rocks and ash-flow tuff, which are in local areas. The rest of the survey area consists of Quaternary sediments deposited as valley fill.

Late Miocene Basin and Range tectonism resulted in the formation of the elongated, north-south trending, fault-block mountain ranges and flat-bottomed valleys currently characteristic of the survey area.

The oldest rocks in the survey area are assigned to the Precambrian McCoy Creek Group, which is located in the

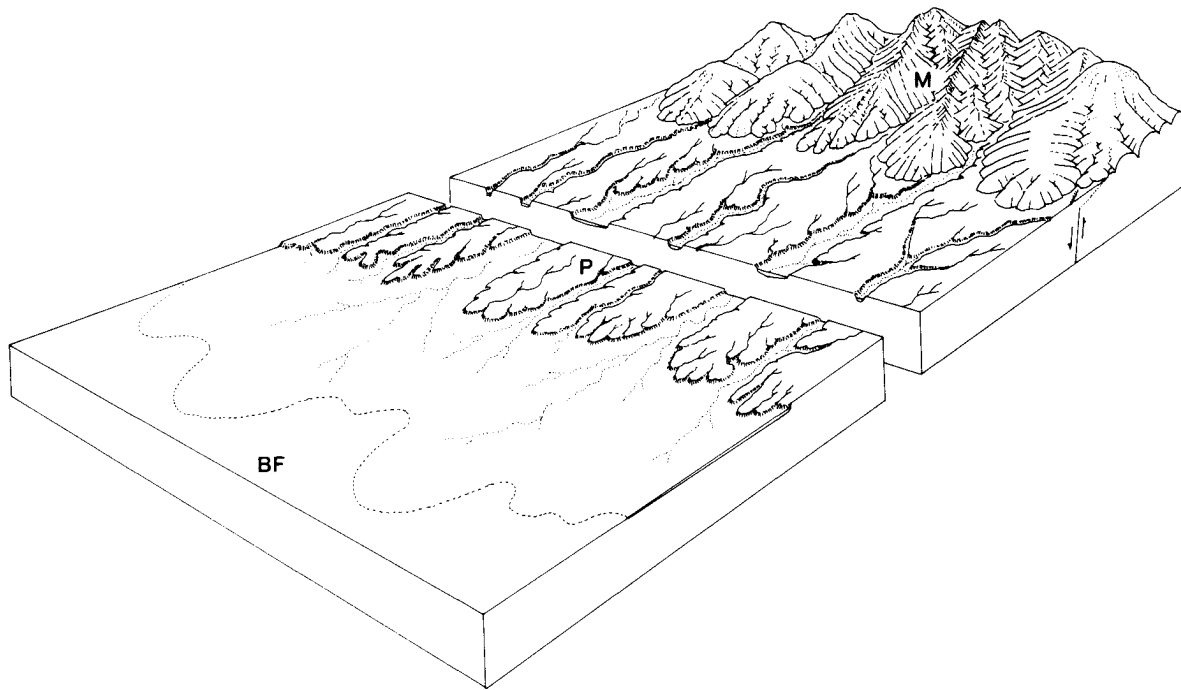


Figure 4.—The major physiographic parts of a typical landscape in the Basin and Range Province. The bounding mountains (M) form the perimeter of the bolson landscape. They are bordered by alluvial landforms of the piedmont slope (P). The piedmont slope grades into the lower basin floor (BF).

southern part of the Cherry Creek Range and in the northern part of the Egan Range. Quartzite is the most abundant rock in this group.

Paleozoic limestone and dolomite dominate the mountains in the survey area. The soils that are typical in areas of these rocks are those of the Zimbob, Tecomar, Hyzen, and Pookaloo series at the lower elevations and those of the Haunchee, Adobe, Wardbay, and Hardzem series at the upper elevations.

Volcanic rocks consisting of rhyolite through andesite are mainly in the central and north-central parts of the survey area. The soils that are typical in areas of these rocks are those of the Birchcreek, Segura, Pioche, Cropper, and Atlow series.

Tertiary sedimentary rocks consisting of siltstone, fine grained, calcareous sandstone, conglomerate, and ash-flow tuff are in scattered areas throughout the survey area. The soils that are typical in areas of these rocks are those of the Biken, Roden, Izar, and Barfan series.

Palinor, Shabliss, Parisa, Yody, and Fax soils are typical of the soils that formed in unconsolidated

Quaternary sediments on stable landforms in intermontane basins.

The youngest parent material in the survey area is recent alluvium on the flood plains along Steptoe Creek, Duck Creek, and the White River. This alluvium consists of stratified clay, silt, sand, and gravel. Duffer, Devilsgait, and Boofuss soils are typical of the soils that formed in this material.

Climate

In this survey area, summers are hot, especially at the lower elevations, and winters are cold. At the lower elevations, precipitation is normally light during all months of the year and the land is used mainly for range. At the higher elevations, precipitation is much greater and snow accumulates to considerable depths. Much of the snowmelt irrigates crops in the nearby valleys.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Ely, Duckwater, Lund, McGill, and Ruth. Table 2 shows probable dates of the first

CHART 1.—CLASSIFICATION OF BOLSON LANDFORMS

Landforms			Parts of landforms	
I Major physiographic part	II Major landform	III Component landform	IV Landform element	V Slope component
Bounding mountains				
Piedmont slope	Mountain valley fan	Erosional fan remnant	Summit Side slope	Shoulder slope Back slope Foot slope
			Partial ballena	Crest Shoulder slope Back slope Foot slope
	Rock pediment	Inset fan Rock pediment remnant	Channel Channel Summit, or Side slope	Crest Shoulder slope Back slope Foot slope
	Ballena		Channel	Crest Shoulder slope Back slope Foot slope
	Alluvial fan	Inset fan Fan collar Erosional fan remnant	Channel Channel Channel Summit Side slope	Shoulder slope Back slope Foot slope
			Partial ballena	Crest Shoulder slope Back slope Foot slope
	Fan piedmont	Inset fan Erosional fan remnant	Channel Channel Summit Side slope	Shoulder slope Back slope Foot slope
			Partial ballena	Crest Shoulder slope Back slope Foot slope
		Inset fan Fan apron Nonburied fan remnant Beach terrace	Channel Channel Channel Channel	

CHART 1.—CLASSIFICATION OF BOLSON LANDFORMS—Continued

Landforms			Parts of landforms	
I Major physiographic part	II Major landform	III Component landform	IV Landform element	V Slope component
Piedmont slope (continued)	Fan skirt	Beach terrace	Channel	
Basin (or bolson) floor	Alluvial flat	Relict alluvial flat Recent alluvial flat	Channel Channel	
	Alluvial plain			
	Sand sheet	Sand dune (parma dune)	Interdune flat	
	Lake plain	Lake-plain terrace	Channel	
	Playa	Flood-plain playa	Channel	

freeze in fall and the last freeze in spring. Table 3 provides data on the length of the growing season.

The lowest temperature on record, which occurred at Ely on February 6, 1989, is -30 degrees F. The highest recorded temperature, which occurred at Ely on July 5, 1985, is 100 degrees.

Growing degree days are shown in table 3. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The heaviest 1-day rainfall during the period of record was 2.87 inches at Ely on September 26, 1982. Snowfall occurs periodically in winter. The number of days with at least 1 inch of snow on the ground varies greatly from year to year.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and the miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the landforms; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landscape or segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge onto one another as their characteristics gradually change. To construct an accurate map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, their observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

This survey area was mapped at an intensity designed to provide interpretations for rangeland management and a general level of wildlife management. Interpretations for additional uses also are provided, but onsite investigations are needed because of the level of detail. Because of the level of mapping intensity and the gradual transition from one soil to another, some areas of similar plant communities were included in some map units. Plant communities that vary to such a degree that species composition or productivity differs greatly from those of the named component soils were identified in the description of contrasting inclusions whenever they were observed by soil scientists. Others were included as similar plant communities; these were not considered

CHART 2.—CLASSIFICATION OF SEMIBOLSON LANDFORMS

Landforms			Parts of landforms	
I Major physiographic part	II Major landform	III Component landform	IV Landform element	V Slope component
Bounding mountains				
Piedmont slope	Ballena			Crest Shoulder slope Back slope Foot slope
	Alluvial fan	Inset fan Fan collar Erosional fan remnant	Channel Channel Channel Summit Side slope	Shoulder slope Back slope Foot slope
	Fan piedmont	Erosional fan remant	Summit Side slope	Shoulder slope Back slope Foot slope
			Partial ballena	Crest Shoulder slope Back slope Foot slope
	Fan skirt	Inset fan Fan apron	Channel Channel Channel Channel	
Basin (or semibolson) floor	Alluvial flat	Alluvial flat Alluvial flat remnant	Channel Channel	
	Alluvial plain	Basin floor remnant Sand dune		
	Axial-stream flood plain	Flood plain Stream terrace	Channel	

to differ in use and management from the potential plant communities of the named components. In map unit 243, for example, some areas of the range site identified as Silty, 8 to 10 inch precipitation zone (028BY013NV), were included as similar to the range site identified as Coarse Silty, 6 to 8 inch precipitation zone (028BY084NV). These range sites could be separated at a high level of mapping intensity. Where land managers require a locally intensive inventory of the potential native plant community, onsite investigation can provide more detailed information. Examples of this kind of investigation are the ecological site inventory of the

U.S. Department of the Interior, Bureau of Land Management, and the range site mapping of the Natural Resources Conservation Service.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted color, texture, size, and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with

precisely defined limits. The classes are used as a basis of comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While the survey was in progress, samples of some of the soils in the survey area were collected for laboratory analyses and for engineering tests. Soil scientists interpreted the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils were field tested through observation of the soils in different uses and under different levels of management. Some interpretations were modified to fit local conditions,

and some new interpretations were developed to meet local needs. Data were assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management were assembled from farm records.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

General Soil Map Units

The general soil map at the back of this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, a map unit consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The soils or miscellaneous areas making up one unit can occur in other units but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils or miscellaneous areas can be identified on the map. Likewise, areas that are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road, building, or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

In the descriptions of general soil map units, a landscape position for each major component is specified. The landscape components usually are selected from the more general categories—major physiographic parts (such as mountains), major landforms (such as fan piedmonts), or component landforms (such as inset fans).

Figures 5 and 6 show how the general soil map units relate to the various broad landscapes. The map units in figure 5 are representative of a bolson, and those in figure 6 are representative of a semibolson.

The 28 general map units in this survey area have been grouped into general kinds of landscapes for broad interpretive purposes. Each of the broad groups and the map units in each group are described on the following pages.

Map Unit Descriptions

Areas Dominated by Soils on Flood Plains, Fan Piedmonts, and Stream Terraces

Three map units are in this group. Elevation is 5,200 feet to 6,700 feet. The average annual precipitation is 7 to 10 inches, the average annual temperature is 45 to 50 degrees F, and the frost-free period is 100 to 130 days.

These soils are nearly level to moderately sloping. They are moderately deep over a duripan or are very deep. They are moderately coarse textured to fine textured throughout. Most of the soils are young and exhibit little, if any, profile development. The rest are on older geomorphic surfaces and exhibit a moderate degree of profile development.

Most of these soils have a seasonal high water table and are subject to flooding. The rest are well drained and are subject to rare flooding. Some of the soils are slightly saline to strongly sodic. The rest are not saline or sodic.

1. Equis-Kunzler-Duffer

Nearly level and gently sloping, very deep, poorly drained and well drained soils on flood plains and stream terraces

This map unit is in the Steptoe Valley. The vegetation is mainly alkali sacaton and alkali cordgrass on the Equis soils; black greasewood, basin big sagebrush, and basin wildrye on the Kunzler soils; and black greasewood, basin wildrye, and alkali sacaton on the Duffer soils.

This unit makes up about 3 percent of the survey area.

The Equis and similar soils are poorly drained. They are on nearly level flood plains adjacent to areas of springs and seeps. They have a fine textured surface layer and subsoil.

The Kunzler and similar soils are well drained. They are on nearly level and gently sloping stream terraces. They have a medium textured surface layer and a medium textured or moderately coarse textured subsoil.

The Duffer and similar soils are poorly drained. They are on nearly level, axial-stream flood plains. They have a medium textured surface layer and a moderately fine textured subsoil.

Of minor extent in this unit are Boofuss, Sycomat, Wintermute, Devilsgait, and similar soils. Boofuss soils are on alluvial flats. They support black greasewood, basin wildrye, and inland saltgrass. Sycomat and Wintermute soils are on fan skirts. Sycomat soils support shadscale, black greasewood, and bottlebrush squirreltail. Wintermute soils support shadscale and Indian ricegrass. Devilsgait soils are on axial-stream flood plains. They support bluegrass, sedge, and rush.

This unit is used for livestock grazing and wildlife habitat.

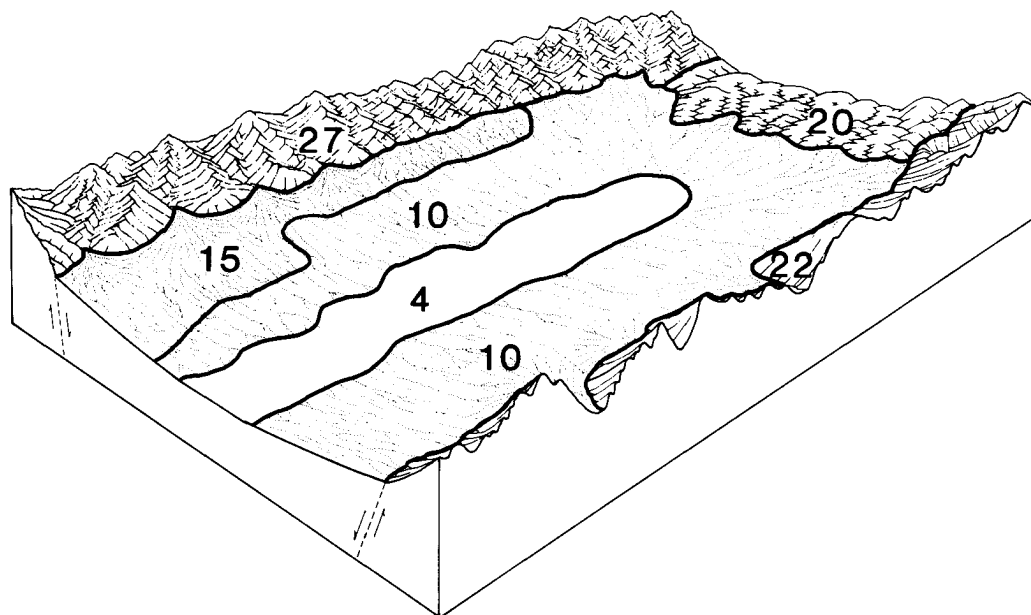


Figure 5.—The relationship of general soil map units to a typical bolson landscape. Units 20, 22, and 27 are on hills and mountains; units 10 and 15 are on landforms of the piedmont slope; and unit 4 is on the basin floor.

2. Duffer-Kunzler

Nearly level and gently sloping, very deep, poorly drained and well drained soils on axial-stream flood plains and stream terraces

This map unit is in the White River Valley. The vegetation is mainly alkali sacaton and alkali cordgrass on the Duffer soils; black greasewood, basin wildrye, and alkali sacaton on the rarely flooded Duffer soils; and Torrey quailbush, basin wildrye, Wyoming big sagebrush, and black greasewood on the Kunzler soils.

This unit makes up about 1 percent of the survey area.

The Duffer and similar soils are poorly drained. They are on nearly level, axial-stream flood plains. They have a medium textured surface layer and a moderately fine textured subsoil.

Drainage of the rarely flooded Duffer and similar soils has been altered. These soils are somewhat poorly drained. They are on nearly level, axial-stream flood plains. They have a medium textured surface layer and a moderately fine textured subsoil.

The Kunzler and similar soils are well drained. They are on gently sloping stream terraces. They have a medium

textured surface layer and a medium textured or moderately coarse textured subsoil.

Of minor extent in this unit are strongly saline Duffer soils and Equis, Sycomat, and similar soils. The strongly saline Duffer soils are on alluvial flats. They support black greasewood and basin wildrye. Equis soils are on flood plains adjacent to areas of springs and seeps. They support alkali sacaton and alkali cordgrass. Sycomat soils are on fan skirts. They support shadscale, black greasewood, and bottlebrush squirreltail.

This unit is used for livestock grazing and wildlife habitat.

3. Sonoma-Kelk-Hunnton

Nearly level to moderately sloping, poorly drained and well drained soils that are moderately deep over a duripan or are very deep; on axial-stream flood plains and fan piedmont remnants

This map unit is in the south end of the Huntington Valley. The vegetation is mainly basin wildrye, basin big sagebrush, and Nevada bluegrass on the Sonoma soils; basin wildrye, western wheatgrass, basin big sagebrush,

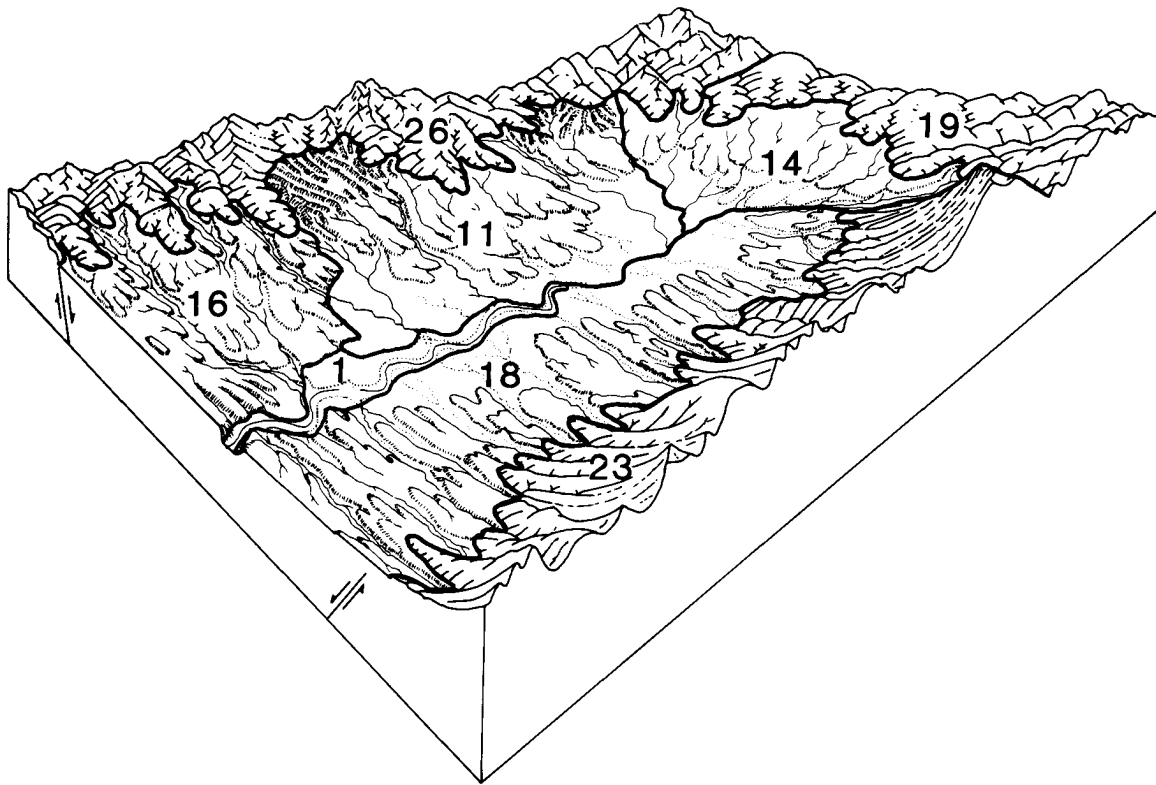


Figure 6.—The relationship of general soil map units to a typical semibolson landscape. Units 19, 23, and 26 are on hills and mountains; units 11, 14, 16, and 18 are on the component landforms of the piedmont slope; and unit 1 is on the axial-stream flood plain and adjoining stream terraces.

and black greasewood on the Kelk soils; and bluebunch wheatgrass, Thurber needlegrass, basin wildrye, and Wyoming big sagebrush on the Hunnton soils.

This unit makes up about 1 percent of the survey area.

The Sonoma and similar soils are very deep and poorly drained. They are on nearly level, axial-stream flood plains. They have a medium textured surface layer and a moderately fine textured subsoil.

The Kelk and similar soils are very deep and well drained. They are on nearly level, axial-stream flood plains. They have a moderately coarse textured surface layer and a medium textured subsoil.

The Hunnton and similar soils are moderately deep over a duripan and are well drained. They are on gently sloping and moderately sloping fan piedmont remnants. They have a medium textured surface layer and a fine textured subsoil and are underlain by an indurated duripan.

Of minor extent in this unit are Wieland soils, Kelk soils that are not subject to flooding, and similar soils. Wieland soils are on the side slopes of fan piedmont remnants. They support vegetation similar to that on the Hunnton soils. The Kelk soils that are not subject to flooding are on inset fans. They support Wyoming big sagebrush, winterfat, basin wildrye, and Indian ricegrass.

This unit is used for livestock grazing and wildlife habitat.

Areas Dominated by Soils on Basin Floors

Six units are in this group. Elevation is 5,800 to 6,400 feet. The average annual precipitation is 7 to 10 inches, the average annual temperature is 44 to 50 degrees F, and the frost-free period is 100 to 120 days.

These soils are nearly level and gently sloping and are very deep. They are moderately coarse textured to fine textured throughout. Some of the soils are young and

exhibit little, if any, profile development. The rest are on slightly older geomorphic surfaces and exhibit minimal profile development.

Some of these soils have a seasonal high water table. Some are subject to rare flooding. Some are slightly saline to strongly sodic. The rest are not saline or sodic.

4. Katelana-Sheffit-Playas

Playas and nearly level, very deep, moderately well drained and well drained soils on basin floors

This map unit is in the Newark Valley. The vegetation is mainly shadscale, black greasewood, and bottlebrush squirreltail on the Katelana soils and black greasewood, big sagebrush, and basin wildrye on the Sheffit soils. The Playas are barren.

This unit makes up about 4 percent of the survey area.

The Katelana and similar soils are well drained. They are on lake plains and alluvial flats. They have a medium textured surface layer and a medium textured and moderately fine textured subsoil.

The Sheffit and similar soils are moderately well drained. They are on lake plains. They have a medium textured surface layer and a fine textured subsoil.

The Playas are subject to periodic ponding. They are fine textured throughout.

Of minor extent in this unit are Heist, Zerk, Linoyer, Equis, Boofuss, and Hessing soils, ponded Katelana soils, and similar soils. Heist, Zerk, Linoyer, and Hessing soils are on beach plains. Heist and Linoyer soils support winterfat and Indian ricegrass. Zerk and Hessing soils support shadscale and Indian ricegrass. Equis soils are on basin floors adjacent to areas of springs and seeps. They support alkali sacaton and alkali cordgrass. Boofuss soils are on basin floors in areas of springs and seeps. They support black greasewood, basin wildrye, and alkali sacaton. The ponded Katelana soils are on basin floors. They support shadscale and bottlebrush squirreltail.

This unit is used for livestock grazing and wildlife habitat.

5. Uwell-Zimwala-Katelana

Nearly level, very deep, moderately well drained and well drained soils that have a medium textured surface layer; on lake plains

This map unit is in the Long Valley and the Little Smoky Valley. The vegetation is mainly Wyoming big sagebrush, winterfat, and Indian ricegrass on the Uwell soils; winterfat and Indian ricegrass on the Zimwala soils; and shadscale, black greasewood, and bottlebrush squirreltail on the Katelana soils.

This unit makes up about 4 percent of the survey area.

The Uwell and similar soils are moderately well drained. They are on lake plains. They have a medium textured

surface layer and a subsoil that is medium textured in the upper part and moderately fine textured and fine textured in the lower part.

The Zimwala and similar soils are moderately well drained. They are on lake plains. They have a medium textured surface layer and medium textured and moderately fine textured underlying layers.

The Katelana and similar soils are well drained. They are on lake plains. They have a medium textured surface layer and a medium textured and moderately fine textured subsoil.

Of minor extent in this unit are Equis, Kunzler, Orupa, Pyrat, Tosser, Tulase, Linoyer, and similar soils. Equis soils are on lake plains. They support black greasewood, basin wildrye, and alkali sacaton. Kunzler, Pryat, and Tosser soils are on beach plains. Kunzler soils support Wyoming big sagebrush, bottlebrush squirreltail, and bluegrass. Pyrat soils support Wyoming big sagebrush and needleandthread. Tosser soils support black sagebrush, Indian ricegrass, and needleandthread. Orupa soils are on parna dunes. They support winterfat, thickspike wheatgrass, and western wheatgrass. Tulase soils are on fan skirts adjacent to basin floors. They support Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, and thickspike wheatgrass. Linoyer soils are on fan skirts adjacent to lake plains. They support winterfat and Indian ricegrass.

This unit is used for livestock grazing and wildlife habitat.

6. Sheffit-Blimo-Uwell

Nearly level, very deep, moderately well drained and well drained soils on basin floors

This map unit is in the Butte Valley. The vegetation is mainly black greasewood, big sagebrush, and basin wildrye on the Sheffit soils; rhizomatous wheatgrass and Indian ricegrass on the Blimo soils; and Wyoming big sagebrush, winterfat, and Indian ricegrass on the Uwell soils.

This unit makes up about 3 percent of the survey area.

The Sheffit and similar soils are moderately well drained. They are on lake plains. They have a medium textured surface layer and a fine textured subsoil.

The Blimo and similar soils are well drained. They are on beach plains. They are gravelly and medium textured in the surface layer and gravelly and moderately coarse textured in the subsoil.

The Uwell and similar soils are moderately well drained. They are on lake plains. They have a medium textured surface layer and a subsoil that is medium textured in the upper part and moderately fine textured or fine textured in the lower part.

Of minor extent in this unit are Pyrat, Tulase, Equis, Hessing, Kunzler, and similar soils. Pyrat and Hessing

soils are on beach plains. Pyrat soils support Wyoming big sagebrush and needleandthread. Hensing soils support shadscale and Indian ricegrass. Tulase soils are on fan skirts adjacent to basin floors. They support Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, and thickspike wheatgrass. Equis soils are on lake plains adjacent to springs and seeps. They support alkali sacaton and alkali cordgrass. Kunzler soils are on basin floors. They support Wyoming big sagebrush, Indian ricegrass, and bluegrass.

This unit is used for livestock grazing and wildlife habitat.

7. Doten-Heist-Bylo

Nearly level, very deep, moderately well drained and well drained soils on lake plains

This map unit is in the Jakes Valley. The vegetation is mainly winterfat, thickspike wheatgrass, and western wheatgrass on the Doten soils and winterfat and Indian ricegrass on the Heist and Bylo soils.

This unit makes about 1 percent of the survey area.

The Doten and similar soils are moderately well drained. They are on lake plains. They are fine textured throughout.

The Heist and similar soils are well drained. They are on the outer margins of lake plains. They have a medium textured surface layer, which is underlain by moderately coarse textured material that is gravelly in the lower part.

The Bylo and similar soils are well drained. They are on lake plains. They have a medium textured surface layer and a moderately fine textured subsoil.

Of minor extent in this unit are Nyak, Uwell, Katelana, Tosser, Equis, and similar soils. Nyak, Uwell, and Katelana soils are on lake plains. Nyak soils support Wyoming big sagebrush and needleandthread. Uwell soils support Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, and thickspike wheatgrass. Katelana soils support shadscale and bottlebrush squirreltail. Tosser soils are on beach plains. They support black sagebrush, Indian ricegrass, and needleandthread. Equis soils are on basin floors. They support black greasewood, basin wildrye, and alkali sacaton.

This unit is used for livestock grazing and wildlife habitat.

8. Playas-Orupa

Playas and nearly level and gently sloping, very deep, well drained soils on basin floors

This map unit is in the Newark Valley and the Long Valley. The Playas are barren. The vegetation on the Orupa soils is mainly Wyoming big sagebrush, winterfat, and Indian ricegrass.

This unit makes up about 1 percent of the survey area.

The Playas are subject to periodic ponding. They are fine textured throughout.

The Orupa and similar soils are on parna dunes. They are fine textured and moderately fine textured throughout.

Of minor extent in this unit are moist Orupa soils and Dune land. The moist Orupa soils are on parna dunes on the basin floors. They support big sagebrush, needleandthread, and Indian ricegrass. Dune land is on the basin floors. It is barren.

This unit is used for livestock grazing and wildlife habitat.

9. Equis-Kolda-Sheffit

Nearly level, very deep, very poorly drained, poorly drained, and moderately well drained soils on lake plains

This map unit is in the Newark Valley and in the Ruby Marsh Wildlife Refuge. The vegetation is mainly black greasewood, basin wildrye, and alkali sacaton on the Equis soils; bluegrass, sedge, and rush on the Kolda soils; and black greasewood, big sagebrush, and basin wildrye on the Sheffit soils.

This unit makes up about 1 percent of the survey area.

The Equis and similar soils are poorly drained. They are on lake plains in areas of springs and seeps. They have a fine textured surface layer, a fine textured and moderately fine textured subsoil, and a medium textured substratum.

The Kolda and similar soils are very poorly drained. They are on lake plains adjacent to areas of springs and seeps. They have a medium textured surface layer and fine textured underlying layers.

The Sheffit and similar soils are moderately well drained. They are on lake plains. They have a medium textured surface layer and a fine textured subsoil.

Of minor extent in this unit are Katelana, Devilsgait, and similar soils and Playas. Katelana soils are on lake plains. They support shadscale and bottlebrush squirreltail. Devilsgait soils are on lake plains, mainly in the Ruby Marsh Wildlife Refuge. They support bulrush and cattail. Playas are on basin floors. They are barren.

This unit is used for livestock grazing and wildlife habitat.

Areas Dominated by Soils on Fan Piedmonts

Nine units are in this group. Elevation is 5,400 feet to 7,800 feet. The average annual precipitation is 6 to 14 inches, the average annual temperature is 45 to 54 degrees F, and the frost-free period is 100 to 130 days.

These soils are nearly level to moderately steep. They are shallow or moderately deep over a duripan or are

shallow or very deep. They are moderately coarse textured to very gravelly and moderately fine textured in the surface layer and moderately coarse textured to very gravelly and fine textured in the subsoil. These soils are on stable geomorphic surfaces. Many of the soils exhibit silica and lime cementation in the substratum. Some of the soils have an accumulation of clay in the subsoil.

These soils are well drained and are not subject to flooding.

10. Wintermute-Kunzler-Sycomat

Nearly level and gently sloping, very deep, well drained soils on fan piedmonts

This map unit is in the Steptoe Valley. The vegetation is mainly shadscale and Indian ricegrass on the Wintermute soils; black greasewood, big sagebrush, and basin wildrye on the Kunzler soils; and shadscale, black greasewood, and bottlebrush squirreltail on the Sycomat soils.

This unit makes up about 3 percent of the survey area.

The Wintermute and similar soils are on nearly level and gently sloping fan piedmont remnants. They are gravelly and moderately coarse textured in the surface layer and very gravelly and moderately coarse textured in the subsoil.

The Kunzler and similar soils are on gently sloping fan piedmonts. They have a medium textured surface layer and a moderately coarse textured subsoil.

The Sycomat and similar soils are on nearly level and gently sloping fan piedmonts. They are moderately coarse textured throughout.

Of minor extent in this unit are Yody, Dewar, Boofuss, Heist, Tulase, Automal, Katelana, and similar soils. Yody soils are on fan piedmont remnants. They support Wyoming big sagebrush and needleandthread. Dewar soils are on the summits of fan piedmont remnants. They support Wyoming big sagebrush, Indian ricegrass, and needleandthread. Boofuss soils are on flood plains adjacent to fan piedmont remnants. They support black greasewood, alkali sacaton, and inland saltgrass. Heist and Tulase soils are on inset fans. Heist soils support winterfat and Indian ricegrass. Tulase soils support Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, and thickspike wheatgrass. Automal soils are on fan piedmont remnants. They support black sagebrush, Indian ricegrass, and needleandthread. Katelana soils are on alluvial flats adjacent to fan piedmont remnants. They support vegetation similar to that on the Sycomat soils.

This unit is used for livestock grazing and rangeland wildlife habitat.

11. Palinor-Shabliss-Blimo

Nearly level to moderately sloping, well drained soils that are shallow over a duripan or are very deep; on fan piedmonts and fan skirts

This map unit is throughout the survey area. The vegetation is mainly black sagebrush, Indian ricegrass, and needleandthread on the Palinor soils; Wyoming big sagebrush, Indian ricegrass, and needleandthread on the Shabliss soils; and Wyoming big sagebrush, rhizomatous wheatgrass, and Indian ricegrass on the Blimo soils.

This unit makes up about 25 percent of the survey area.

The Palinor and similar soils are shallow over a duripan. They are on gently sloping and moderately sloping fan piedmont remnants. They are very gravelly and medium textured and are underlain by an indurated duripan.

The Shabliss and similar soils are shallow over a duripan. They are on gently sloping and moderately sloping fan piedmont remnants. They are gravelly and medium textured and are underlain by a strongly cemented duripan.

The Blimo and similar soils are very deep. They are on nearly level and gently sloping fan skirts. They have a medium textured surface layer and a moderately coarse textured subsoil.

Of minor extent in this unit are Tulase, Yody, Broland, Urmafot, Heist, Zerk, Linoyer, and similar soils. Tulase and Linoyer soils are on inset fans. Tulase soils support Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, and thickspike wheatgrass. Linoyer soils support winterfat and Indian ricegrass. Yody soils are on fan piedmont remnants. They support Wyoming big sagebrush and needleandthread. Broland soils are on the summits of fan piedmont remnants. They support black sagebrush, Indian ricegrass, and Thurber needlegrass. Urmafot soils are on the upper fan piedmont remnants. They support black sagebrush and bluebunch wheatgrass. Heist soils are on fan skirts. They support winterfat and Indian ricegrass. Zerk soils are on beach plains adjacent to fan piedmonts. They support shadscale and Indian ricegrass.

This unit is used for livestock grazing and wildlife habitat.

12. Wintermute-Palinor-Urmafot

Gently sloping to strongly sloping, well drained soils that are shallow over a duripan or are very deep; on fan piedmonts

This map unit is in the western half of the survey area. The vegetation is mainly shadscale and Indian ricegrass

on the Wintermute soils; black sagebrush, Indian ricegrass, and needleandthread on the Palinor soils; and black sagebrush and bluebunch wheatgrass on the Urmafot soils.

This unit makes up about 2 percent of the survey area.

The Wintermute and similar soils are very deep. They are on the gently sloping and moderately sloping, lower fan piedmont remnants. They are gravelly and medium textured in the surface layer and very gravelly and moderately coarse textured in the subsoil.

The Palinor and similar soils are shallow over a duripan. They are on gently sloping and moderately sloping fan piedmont remnants. They are very gravelly and medium textured and are underlain by an indurated duripan.

The Urmafot and similar soils are shallow over a duripan. They are on the moderately sloping and strongly sloping, upper fan piedmont remnants. They are gravelly and medium textured and are underlain by an indurated duripan.

Of minor extent in this unit are Broyles, Katelana, Shabliss, Tulase, Broyles, Borvant, Biken, and similar soils. Broyles and Shabliss soils are on the summits of fan piedmont remnants. Broyles soils support black sagebrush, Indian ricegrass, and Thurber needlegrass. Shabliss soils support Wyoming big sagebrush, Indian ricegrass, and needleandthread. Wintermute and Broyles soils are on fan skirts. They support shadscale and Indian ricegrass. Tulase soils are on inset fans. They support Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, and thickspike wheatgrass. Borvant soils are on fan piedmont remnants. They support singleleaf pinyon, Utah juniper, mountain big sagebrush, and bluebunch wheatgrass. Biken soils are on the side slopes of fan piedmont remnants that have a rock core. They support black sagebrush, Indian ricegrass, and needleandthread.

This unit is used for livestock grazing and wildlife habitat.

13. Bylo-Nyala-Breko

Nearly level and gently sloping, very deep, well drained soils on fan piedmont remnants and inset fans

This map unit is in the White River Valley. The vegetation is mainly winterfat and Indian ricegrass on the Bylo soils; shadscale, winterfat, and Indian ricegrass on the Nyala soils; and Wyoming big sagebrush, galleta, and Indian ricegrass on the Breko soils.

This unit makes up about 1 percent of the survey area.

The Bylo and similar soils are very deep. They are on nearly level inset fans. They have a medium textured surface layer and a moderately fine textured subsoil.

The Nyala and similar soils are very deep. They are on nearly level and gently sloping fan piedmont remnants.

They have a moderately coarse textured surface layer, a moderately fine textured subsoil, and a moderately coarse textured and coarse textured substratum.

The Breko and similar soils are very deep. They are on nearly level and gently sloping fan piedmont remnants. They are gravelly and moderately coarse textured in the surface layer, very gravelly and moderately fine textured in the subsoil, and extremely gravelly and coarse textured in the substratum.

Of minor extent in this unit are Broyles, Katelana, Raph, Unsel, Armespan, and similar soils. Broyles and Raph soils are on fan skirts. They support shadscale and Indian ricegrass. Katelana soils are on alluvial flats adjacent to fan piedmont remnants. They support shadscale, black greasewood, and bottlebrush squirreltail. Unsel and Armespan soils are on fan piedmont remnants. Unsel soils support shadscale, galleta, and bud sagebrush. Armespan soils support black sagebrush, galleta, bud sagebrush, and Indian ricegrass.

This unit is used for livestock grazing and wildlife habitat.

14. Hunnton-Yody-Chiara

Gently sloping and moderately sloping, well drained soils that are shallow or moderately deep over a duripan; on fan piedmont remnants

This map unit is in the Huntington Valley. The vegetation is mainly bluebunch wheatgrass, Thurber needlegrass, basin wildrye, and Wyoming big sagebrush.

This unit makes up about 3 percent of the survey area.

The Hunnton and similar soils are moderately deep over a duripan. They are on fan piedmont remnants. They have a medium textured surface layer and a fine textured subsoil and are underlain by an indurated duripan.

The Yody and similar soils are moderately deep over a duripan. They are on fan piedmont remnants. They are gravelly and moderately coarse textured in the surface layer and gravelly and moderately fine textured in the subsoil and are underlain by an indurated duripan.

The Chiara and similar soils are shallow over a duripan. They are on fan piedmont remnants. They are medium textured in the surface layer and subsoil and are underlain by an indurated duripan.

Of minor extent in this unit are Palinor, Urmafot, Borvant, Kunzler, Shabliss, Fax, Biken, and similar soils. Palinor, Borvant, Kunzler, and Fax soils are on fan piedmont remnants. Palinor soils support black sagebrush, Indian ricegrass, and needleandthread. Borvant soils support singleleaf pinyon, Utah juniper, mountain big sagebrush, and bluebunch wheatgrass. Kunzler soils support black greasewood, big sagebrush, and basin wildrye. Fax soils support big sagebrush and Thurber needlegrass. Urmafot soils are on the upper fan

piedmont remnants. They support black sagebrush and bluebunch wheatgrass. Shabliss soils are on the summits of fan piedmont remnants. They support Wyoming big sagebrush, Indian ricegrass, and needleandthread. Biken soils are on the side slopes of fan piedmont remnants that have a rock core. They support black sagebrush, Indian ricegrass, and needleandthread.

This unit is used for livestock grazing and wildlife habitat.

15. Palinor-Urmafot-Biken

Gently sloping to strongly sloping, well drained soils that are shallow over a duripan or bedrock; on fan piedmont remnants

This map unit is on the west side of the White River Valley. The vegetation is mainly black sagebrush, Indian ricegrass, and needleandthread on the Palinor and Biken soils and black sagebrush and bluebunch wheatgrass on the Urmafot soils.

This unit makes up about 2 percent of the survey area.

The Palinor and similar soils are shallow over a duripan. They are on gently sloping to strongly sloping fan piedmont remnants. They are very gravelly and medium textured and are underlain by an indurated duripan.

The Urmafot and similar soils are shallow over a duripan. They are on the moderately sloping and strongly sloping, upper fan piedmont remnants. They are very gravelly and medium textured and are underlain by an indurated duripan.

The Biken and similar soils are shallow over bedrock. They are on gently sloping to strongly sloping fan piedmont remnants that have a rock core. They are very gravelly and moderately coarse textured and are underlain by weathered, tuffaceous bedrock.

Of minor extent in this unit are Yody, Broland, Heist, Pyrat, Barfan, and Pern soils, very shallow Urmafot soils, and similar soils. Yody soils are on fan piedmont remnants. They support Wyoming big sagebrush and Thurber needlegrass. Broland and Pryat soils are on the summits of fan piedmont remnants. Broland soils support black sagebrush, Indian ricegrass, and Thurber needlegrass. Pryat soils support Wyoming big sagebrush and needleandthread. Heist soils are on fan skirts. They support winterfat and Indian ricegrass. Barfan soils are on fan piedmont remnants that have a rock core. They support pigmy sagebrush, Indian ricegrass, and needleandthread. Pern soils are on inset fans. They support basin big sagebrush and basin wildrye. The very shallow Urmafot soils are on fan piedmont remnants. They support singleleaf pinyon, Utah juniper, black sagebrush, and bluebunch wheatgrass.

This unit is used for livestock grazing and wildlife habitat.

16. Palinor-Roden-Urmafot

Gently sloping to moderately steep, well drained soils that are shallow over a duripan or bedrock; on fan piedmonts

This map unit is in the southwestern part of the survey area. The vegetation is mainly black sagebrush, Indian ricegrass, and needleandthread on the Palinor and Roden soils and black sagebrush and bluebunch wheatgrass on the Urmafot soils.

This unit makes up about 3 percent of the survey area.

The Palinor and similar soils are shallow over a duripan. They are on gently sloping and moderately sloping fan piedmont remnants. They are very gravelly and medium textured and are underlain by an indurated duripan.

The Roden and similar soils are shallow over bedrock. They are on strongly sloping and moderately steep fan piedmont remnants that have a rock core. They are very gravelly and moderately fine textured in the surface layer and very gravelly and fine textured in the subsoil and are underlain by weathered bedrock.

The Urmafot and similar soils are shallow over a duripan. They are on the moderately sloping and strongly sloping, upper fan piedmont remnants. They are very gravelly and medium textured and are underlain by an indurated duripan.

Of minor extent in this unit are Shabliss soils, moist Roden soils, and Belmill, Bobs, Broland, Yody, and similar soils. Shabliss and Broland soils are on the summits of fan piedmont remnants. Shabliss soils support Wyoming big sagebrush, Indian ricegrass, and needleandthread. Broland soils support black sagebrush, Indian ricegrass, and Thurber needlegrass. The moist Roden soils are on fan piedmont remnants that have a rock core. They support singleleaf pinyon, Utah juniper, black sagebrush, and bluebunch wheatgrass. Belmill, Bobs, and Yody soils are on fan piedmont remnants. Belmill soils support Wyoming big sagebrush and Thurber needlegrass. Bobs soils support big sagebrush and Indian ricegrass. Yody soils support big sagebrush, basin wildrye, bluegrass, and thickspike wheatgrass.

This unit is used for livestock grazing and wildlife habitat.

17. Wredah-Tulase-Urmafot

Gently sloping and moderately sloping, well drained soils that are shallow over a duripan or are very deep; on fan piedmonts

This map unit is in the north end of the Cave Valley. The vegetation is mainly big sagebrush and Thurber needlegrass on the Wredah soils; Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, and

thickspike wheatgrass on the Tulase soils; and black sagebrush and bluebunch wheatgrass on the Urmafot soils.

This unit makes up about 1 percent of the survey area.

The Wredah and similar soils are very deep. They are on moderately sloping fan piedmont remnants. They are gravelly and moderately coarse textured in the surface layer. The subsoil is gravelly and moderately fine textured in the upper part and very gravelly and moderately coarse textured in the lower part.

The Tulase and similar soils are very deep. They are on gently sloping and moderately sloping inset fans. They are medium textured throughout.

The Urmafot and similar soils are shallow over a duripan. They are on the gently sloping and moderately sloping, upper fan piedmont remnants. They are very gravelly and medium textured and are underlain by an indurated duripan.

Of minor extent in this unit are Palinor, Selti, Pern, and Bobs soils, very shallow Urmafot soils, and similar soils. Palinor, Selti, and Bobs soils and the very shallow Urmafot soils are on fan piedmont remnants. Palinor soils support black sagebrush, Indian ricegrass, and needleandthread. Selti soils support big sagebrush and Thurber needlegrass. Bobs soils support big sagebrush and Indian ricegrass. The very shallow Urmafot soils support singleleaf pinyon, Utah juniper, black sagebrush, and bluebunch wheatgrass. Pern soils are on inset fans. They support basin big sagebrush and basin wildrye.

This unit is used for livestock grazing and wildlife habitat.

18. Cowgil-Cassiro-Yody

Gently sloping to strongly sloping, well drained soils that are moderately deep over a duripan or are very deep; on fan piedmont remnants

This map unit is in the western part of the survey area. The vegetation is mainly Wyoming big sagebrush and needleandthread on the Cowgil soils; mountain big sagebrush and bluebunch wheatgrass on the Cassiro soils; and Wyoming big sagebrush and Thurber needlegrass on the Yody soils.

This unit makes up about 3 percent of the survey area.

The Cowgil and similar soils are very deep. They are on fan piedmont remnants. They are very gravelly and moderately coarse textured in the surface layer, very gravelly and moderately fine textured in the subsoil, and very cobbly and coarse textured in the substratum.

The Cassiro and similar soils are very deep. They are on fan piedmont remnants. They are stony and medium textured in the surface layer and very gravelly and fine textured in the subsoil.

The Yody and similar soils are moderately deep over a duripan. They are on fan piedmont remnants. They are

gravelly and moderately coarse textured in the surface layer and gravelly and moderately fine textured in the subsoil and are underlain by an indurated duripan.

Of minor extent in this unit are Fax, Pyrat, Broyles, Palinor, Urmafot, and similar soils. Fax, Pyrat, and Palinor soils are on fan piedmont remnants. Fax soils support big sagebrush and Thurber needlegrass. Pyrat soils support Wyoming big sagebrush and needleandthread. Palinor soils support black sagebrush, Indian ricegrass, and needleandthread. Broyles soils are on fan skirts. They support shadscale and Indian ricegrass. Urmafot soils are on the upper fan piedmont remnants. They support black sagebrush and bluebunch wheatgrass.

This unit is used for livestock grazing and wildlife habitat.

Areas Dominated by Soils on Hills and Mountains

Ten units are in this group. The soils in this group are dominantly on hills and mountains. Elevation is 6,000 feet to 10,900 feet. The average annual precipitation is 12 to 25 inches, the average annual temperature is 39 to 51 degrees F, and the frost-free period is 40 to 110 days.

These soils are strongly sloping to very steep and are very shallow to very deep. They are very gravelly or extremely stony and moderately coarse textured in the surface layer and very cobbly and fine textured in the subsoil and generally are underlain by bedrock. Most of the soils are on stable geomorphic surfaces and have an organic-enriched surface layer and an accumulation of lime or clay in the subsoil. Some of the soils are on unstable geomorphic surfaces and are eroding as rapidly as they are forming.

These soils are well drained and are not subject to flooding.

19. Atlow-Upatad-Pioche

Strongly sloping to steep, shallow, well drained soils on hills and mountains

This map unit is throughout the survey area. The vegetation is mainly black sagebrush, Indian ricegrass, and Thurber needlegrass on the Atlow soils; black sagebrush, bluebunch wheatgrass, and Thurber needlegrass on the Upatad soils; and singleleaf pinyon, Utah juniper, mountain big sagebrush, and bluebunch wheatgrass on the Pioche soils.

This unit makes up about 4 percent of the survey area.

The Atlow and similar soils are on the strongly sloping and moderately steep side slopes of hills and mountains. They are very gravelly and medium textured in the surface layer and very gravelly and moderately fine textured in the subsoil and are underlain by hard bedrock.

The Upatad and similar soils are on the strongly sloping and moderately steep side slopes of hills and mountains. They are very gravelly and medium textured in

the surface layer and very gravelly and moderately fine textured in the subsoil and are underlain by hard bedrock.

The Pioche and similar soils are on the moderately steep and steep side slopes of hills and mountains. They are extremely stony and medium textured in the surface layer and very cobbly and fine textured in the subsoil and are underlain by hard bedrock.

Of minor extent in this unit are Maderbak, Cropper, Stewval, McIvey, and similar soils and Rubble land. Maderbak soils and Rubble land are on the side slopes of hills and mountains. Maderbak soils support Wyoming big sagebrush and Thurber needlegrass. Rubble land is barren. Cropper soils are on the north-facing side slopes of hills and mountains. They support singleleaf pinyon and bluebunch wheatgrass. Stewval soils are on the side slopes of hills and mountains, mainly along the Nye County line. They support black sagebrush and galleta. McIvey soils are on the concave side slopes of hills and mountains. They support mountain big sagebrush and bluebunch wheatgrass.

This unit is used for livestock grazing, woodland, and wildlife habitat.

20. Zimbob-Pookaloo-Hyzen

Moderately steep and steep, very shallow and shallow, well drained soils on hills and mountains

This map unit is in scattered areas throughout the survey area. The vegetation is mainly black sagebrush and Indian ricegrass on the Zimbob soils; singleleaf pinyon, Utah juniper, black sagebrush, and bluebunch wheatgrass on the Pookaloo soils; and littleleaf mountainmahogany and black sagebrush on the Hyzen soils.

This unit makes up about 3 percent of the survey area.

The Zimbob and similar soils are shallow. They are on the moderately steep and steep crests and side slopes of hills and mountains. They are very gravelly and medium textured or very gravelly and moderately coarse textured and are underlain by hard bedrock.

The Pookaloo and similar soils are shallow. They are on the moderately steep and steep crests and side slopes of hills and mountains. They are very gravelly and medium textured and are underlain by hard bedrock.

The Hyzen and similar soils are very shallow. They are on the moderately steep and steep crests and side slopes of hills and mountains. They are extremely stony and medium textured and are underlain by hard bedrock.

Of minor extent in this unit are the Tecomar, Atlow, and Maderbak soils, very shallow Zimbob soils, and similar soils. Tecomar and Atlow soils and the very shallow Zimbob soils are on the crests and side slopes of hills and mountains. Tecomar soils support black sagebrush and bluebunch wheatgrass. Atlow soils support black sagebrush and Indian ricegrass. The very shallow Zimbob

soils support black sagebrush, Utah juniper, and Indian ricegrass. Maderbak soils are on the crests and side slopes of hills and mountains, mainly in areas along the Nye County line. They support Wyoming big sagebrush and galleta.

This unit is used for livestock grazing, woodland, and wildlife habitat.

21. Pookaloo-Zimbob-Cavehill

Moderately steep and steep, shallow and moderately deep, well drained, carbonatic soils on mountains

This map unit is mainly in the north-central part of the survey area. The vegetation is mainly singleleaf pinyon, black sagebrush, and bluebunch wheatgrass on the Pookaloo soils; black sagebrush and Indian ricegrass on the Zimbob soils; and singleleaf pinyon, curleaf mountainmahogany, mountain big sagebrush, and bluebunch wheatgrass on the Cavehill soils.

This unit makes up about 11 percent of the survey area.

The Pookaloo and similar soils are shallow. They are on the moderately steep and steep crests and side slopes of mountains. They are very gravelly and medium textured and are underlain by hard bedrock.

The Zimbob and similar soils are shallow. They are on the moderately steep and steep crests and side slopes of mountains. They are very gravelly and medium textured or very gravelly and moderately coarse textured and are underlain by hard bedrock.

The Cavehill and similar soils are moderately deep. They are on the moderately steep and steep, upper side slopes of mountains. They are very gravelly and medium textured in the surface layer and very gravelly or very cobbly and medium textured in the subsoil and are underlain by hard bedrock.

Of minor extent in this unit are Tecomar, Haunchee, Segura, Pioche, and McIvey soils, very shallow Zimbob soils, and similar soils and Rock outcrop. Tecomar soils and Rock outcrop are on the crests and side slopes of mountains. Tecomar soils support black sagebrush and bluebunch wheatgrass. Rock outcrop is barren. Haunchee soils are on the upper crests and side slopes of mountains. They support curleaf mountainmahogany, mountain big sagebrush, and bluebunch wheatgrass. Segura and Pioche soils are on the side slopes of mountains. Segura soils support mountain big sagebrush, bluebunch wheatgrass, and Thurber needlegrass. Pioche soils support singleleaf pinyon, Utah juniper, mountain big sagebrush, and bluebunch wheatgrass. McIvey soils are on the concave side slopes of mountains. They support mountain big sagebrush and bluebunch wheatgrass. The very shallow Zimbob soils are on the lower side slopes of mountains. They support black sagebrush, Utah juniper, and Indian ricegrass.

This unit is used for woodland, livestock grazing, and wildlife habitat.

22. Pookaloo-Hyzen-Cavehill

Moderately steep to very steep, very shallow to moderately deep, well drained soils on mountains

This map unit is mainly in the Egan Range. The vegetation is mainly singleleaf pinyon, Utah juniper, black sagebrush, and bluebunch wheatgrass on the Pookaloo soils; littleleaf mountainmahogany and black sagebrush on the Hyzen soils; and singleleaf pinyon, curlleaf mountainmahogany, mountain big sagebrush, and bluebunch wheatgrass on the Cavehill soils.

This unit makes up about 5 percent of the survey area.

The Pookaloo and similar soils are shallow. They are on the steep and very steep side slopes of mountains. They are very gravelly and medium textured and are underlain by hard bedrock.

The Hyzen and similar soils are very shallow. They are on the steep and very steep side slopes of mountains. They are extremely stony and medium textured and are underlain by hard bedrock.

The Cavehill and similar soils are moderately deep. They are on the moderately steep and steep side slopes of mountains. They are very gravelly and medium textured in the surface layer and very gravelly or very cobbly and medium textured in the subsoil and are underlain by hard bedrock.

Of minor extent in this unit are Eganroc, Wardbay, Hardol, Adobe, and similar soils and Rock outcrop. Eganroc soils are on the upper, north-facing side slopes of mountains. They support white fir, limber pine, and bristlecone pine. Wardbay soils are on the upper side slopes of mountains. They support mountain big sagebrush and bluebunch wheatgrass. Hardol soils are on the concave, north-facing side slopes of mountains. They support mountain big sagebrush, bluebunch wheatgrass, and Columbia needlegrass. Adobe soils are on the upper crests of mountains. They support black sagebrush and bluebunch wheatgrass. Rock outcrop is on the crests and side slopes of mountains. It is barren.

This unit is used for woodland, livestock grazing, and wildlife habitat.

23. Birchcreek-Segura-Pioche

Moderately steep and steep, shallow and moderately deep, well drained soils on mountains

This map unit is mainly in the central part of the survey area. The vegetation is mainly antelope bitterbrush, mountain big sagebrush, and bluebunch wheatgrass on the Birchcreek soils; mountain big sagebrush, bluebunch wheatgrass, and Thurber needlegrass on the Segura

soils; and singleleaf pinyon, Utah juniper, mountain big sagebrush, and bluebunch wheatgrass on the Pioche soils.

This unit makes up about 5 percent of the survey area.

The Birchcreek and similar soils are moderately deep. They are on the moderately steep and steep side slopes of mountains. They are very cobbly and medium textured in the surface layer and very cobbly and fine textured in the subsoil and are underlain by hard bedrock.

The Segura and similar soils are shallow. They are on the moderately steep and steep side slopes of mountains. They are very cobbly and medium textured in the surface layer and gravelly and moderately fine textured in the subsoil and are underlain by hard bedrock.

The Pioche and similar soils are shallow. They are on the moderately steep and steep side slopes of mountains. They are extremely stony and medium textured in the surface layer and very cobbly and fine textured in the subsoil and are underlain by hard bedrock.

Of minor extent in this unit are Upatad, Chen, McIvey, Hutchley, Atlow, Cropper, and similar soils. Upatad soils are on the side slopes of mountains. They support black sagebrush and bluebunch wheatgrass. Chen soils are on the side slopes and crests of mountains. They support low sagebrush and bluebunch wheatgrass. McIvey soils are on the concave side slopes of mountains. They support mountain big sagebrush and bluebunch wheatgrass. Hutchley soils are on the crests of mountains. They support low sagebrush, black sagebrush, and bluebunch wheatgrass. Atlow soils are on the lower side slopes of mountains. They support black sagebrush and Indian ricegrass. Cropper soils are on the upper, north-facing side slopes of mountains. They support singleleaf pinyon, curlleaf mountainmahogany, mountain big sagebrush, and bluebunch wheatgrass.

This unit is used for livestock grazing, wildlife habitat, and woodland.

24. Cavehill-Haunchee-Hyzen

Steep and very steep, very shallow and moderately deep, well drained soils on mountains

This map unit is in the southern part of the Egan and Schell Creek Ranges. The vegetation is mainly singleleaf pinyon, curlleaf mountainmahogany, and mountain big sagebrush on the Cavehill soils; curlleaf mountainmahogany, mountain big sagebrush, and bluebunch wheatgrass on the Haunchee soils; and littleleaf mountainmahogany and black sagebrush on the Hyzen soils.

This unit makes up about 3 percent of the survey area.

The Cavehill and similar soils are moderately deep. They are on the steep and very steep side slopes of mountains. They are cobbly and medium textured in the

surface layer and very gravelly or very cobbly and medium textured in the subsoil and are underlain by hard bedrock.

The Haunchee and similar soils are very shallow. They are on the steep and very steep side slopes of mountains. They are very cobbly and medium textured in the surface layer and very gravelly or very cobbly and medium textured in the subsoil and are underlain by hard bedrock.

The Hyzen and similar soils are very shallow. They are on the steep and very steep crests and side slopes of mountains. They are extremely stony and medium textured and are underlain by hard bedrock.

Of minor extent in this unit are Hardzem, Wardbay, Hardol, Adobe, Pookaloo, and similar soils and Rock outcrop. Hardzem soils are on the upper, north-facing side slopes of mountains. They support white fir, limber pine, and bristlecone pine. Wardbay soils are on the upper side slopes of mountains. They support mountain big sagebrush and bluebunch wheatgrass. Hardol soils are on the concave, north-facing side slopes of mountains. They support curleaf mountainmahogany, mountain big sagebrush, and bluebunch wheatgrass. Adobe soils are on mountain crests. They support black sagebrush and bluebunch wheatgrass. Pookaloo soils are on the lower side slopes of mountains. They support singleleaf pinyon, Utah juniper, black sagebrush, and bluebunch wheatgrass. Rock outcrop is on the crests and side slopes of mountains. It is barren.

This unit is used for woodland and wildlife habitat.

25. McIvey-Hutchley-Segura

Moderately steep and steep, shallow and very deep, well drained soils on mountains

This map unit is mainly in the Diamond Mountains. The vegetation is mainly mountain big sagebrush and bluebunch wheatgrass on the McIvey soils; low sagebrush, black sagebrush, and bluebunch wheatgrass on the Hutchley soils; and mountain big sagebrush and bluebunch wheatgrass on the Segura soils.

This unit makes up about 2 percent of the survey area.

The McIvey and similar soils are very deep. They are on the moderately steep and steep, concave side slopes of mountains. They are very gravelly and medium textured in the surface layer and extremely cobbly and fine textured in the subsoil.

The Hutchley and similar soils are shallow. They are on the moderately steep and steep crests and convex side slopes of mountains. They are very gravelly and moderately coarse textured in the surface layer and very gravelly and medium textured or moderately fine textured in the subsoil and are underlain by hard bedrock.

The Segura and similar soils are shallow. They are on the moderately steep and steep side slopes of mountains. They are very cobbly and medium textured in the surface

layer and gravelly and moderately fine textured in the subsoil and are underlain by hard bedrock.

Of minor extent in this unit are Wardbay, Onkeyo, Adobe, Haunchee, Chen, Pioche, Pookaloo, and similar soils. Wardbay soils are on the side slopes of mountains. They support mountain big sagebrush and bluebunch wheatgrass. Onkeyo soils are on the convex side slopes of mountains. They support mountain big sagebrush and bluebunch wheatgrass. Adobe soils are on the crests and convex side slopes of mountains. They support black sagebrush and bluebunch wheatgrass. Haunchee soils are on the crests and side slopes of mountains. They support curleaf mountainmahogany, mountain big sagebrush, and bluebunch wheatgrass. Chen, Pioche, and Pookaloo soils are on the side slopes of mountains. Chen soils support low sagebrush, bluebunch wheatgrass, and Thurber needlegrass. Pioche soils support singleleaf pinyon, Utah juniper, mountain big sagebrush, and bluebunch wheatgrass. Pookaloo support singleleaf pinyon, Utah juniper, black sagebrush, and bluebunch wheatgrass.

This unit is used for livestock grazing and wildlife habitat.

26. Hardol-Haunchee-Wardbay

Moderately steep and steep, shallow, deep, and very deep, well drained soils on mountains

This map unit is in mountains in the northern part of the survey area. The vegetation is mainly mountain big sagebrush, bluebunch wheatgrass, and Columbia needlegrass on the Hardol soils; curleaf mountainmahogany, mountain big sagebrush, and bluebunch wheatgrass on the Haunchee soils; and mountain big sagebrush and bluebunch wheatgrass on the Wardbay soils.

This unit makes up about 2 percent of the survey area.

The Hardol and similar soils are very deep. They are on the moderately steep and steep, concave side slopes of mountains. They are very gravelly and medium textured in the surface layer and extremely gravelly and medium textured in the subsoil.

The Haunchee and similar soils are shallow. They are on the moderately steep and steep, convex side slopes of mountains. They are very cobbly and medium textured in the surface layer and very gravelly or very cobbly and medium textured in the subsoil and are underlain by hard bedrock.

The Wardbay and similar soils are deep. They are on the moderately steep and steep side slopes of mountains. They are very gravelly and medium textured in the surface layer and extremely cobbly or extremely gravelly and medium textured in the subsoil and are underlain by hard bedrock.

Of minor extent in this unit are Adobe, Xine, Halacan,

and similar soils. Adobe soils are on mountain crests. They support black sagebrush and bluebunch wheatgrass. Xine soils are on the lower, concave side slopes of mountains. They support mountain big sagebrush and bluebunch wheatgrass. Halacan soils are on the upper crests of mountains. They support black sagebrush and bluebunch wheatgrass.

This unit is used for livestock grazing and wildlife habitat.

27. Haunchee-Hardzem-Wardbay

Moderately steep to very steep, shallow to deep, well drained soils on mountains

This map unit is in the northern part of the Egan Range. The vegetation is mainly curleaf mountainmahogany, mountain big sagebrush, and bluebunch wheatgrass on the Haunchee soils; white fir, limber pine, mountain big sagebrush, and spike-fescue on the Hardzem soils; and mountain big sagebrush and bluebunch wheatgrass on the Wardbay soils.

This unit makes up about 2 percent of the survey area.

The Haunchee and similar soils are shallow. They are on the steep and very steep, convex side slopes of mountains. They are very cobbly and medium textured in the surface layer and very gravelly and medium textured in the subsoil and are underlain by hard bedrock.

The Hardzem and similar soils are moderately deep. They are on the steep and very steep, concave, north-facing side slopes of mountains. They are channery and medium textured in the surface layer and very channery or extremely channery and medium textured in the subsoil and are underlain by soft bedrock.

The Wardbay and similar soils are deep. They are on the moderately steep and steep side slopes of mountains. They are very gravelly and medium textured in the surface layer and extremely gravelly or extremely cobbly and medium textured in the subsoil and are underlain by hard bedrock.

Of minor extent in this unit are Muirai, Eganroc, Hardol, Chen, Tusel, Hyzen, Adobe, and similar soils. Muirai soils are on mountain crests. They support Englemann spruce, mountain gooseberry, mountain brome, and Columbia needlegrass. Eganroc soils are on the side slopes of mountains. They support white fir, limber pine, and bristlecone pine. Hardol and Tusel soils are on the concave side slopes of mountains. Hardol soils support mountain big sagebrush, bluebunch wheatgrass, and Columbia needlegrass. Tusel soils support mountain big sagebrush and bluebunch wheatgrass. Chen, Hyzen, and Adobe soils are on the crests and side slopes of mountains. Chen soils support low sagebrush, bluebunch wheatgrass, and Thurber needlegrass. Hyzen soils

support littleleaf mountainmahogany, black sagebrush, and Scribner needlegrass. Adobe soils support black sagebrush and bluebunch wheatgrass.

This unit is used for woodland, livestock grazing, and wildlife habitat.

28. Stewval-Pioche

Strongly sloping to steep, shallow, well drained soils on hills and mountains

This map unit is in the southern part of the survey area. The vegetation is mainly black sagebrush, bluegrass, and galleta on the Stewval soils and singleleaf pinyon, Utah juniper, mountain big sagebrush, and bluebunch wheatgrass on the Pioche soils.

This unit makes up about 1 percent of the survey area.

The Stewval and similar soils are on the strongly sloping and moderately steep side slopes of hills and mountains. They are very gravelly and moderately coarse textured in the surface layer and very gravelly and medium textured in the subsoil and are underlain by hard bedrock.

The Pioche and similar soils are on the moderately steep and steep side slopes of hills and mountains. They are extremely stony and medium textured in the surface layer and very cobbly and fine textured in the subsoil and are underlain by hard bedrock.

Of minor extent in this unit are Maderbak, Cropper, McIvey, and similar soils and Rubble land. Maderbak soils and Rubble land are on the side slopes of hills and mountains. Maderbak soils support Wyoming big sagebrush and Thurber needlegrass. Rubble land is barren. Cropper soils are on the north-facing side slopes of hills and mountains. They support singleleaf pinyon and bluebunch wheatgrass. McIvey soils are on the concave side slopes of hills and mountains. They support mountain big sagebrush and bluebunch wheatgrass.

This unit is used for livestock grazing, woodland, and wildlife habitat.

Broad Land Use Considerations

The soils in this survey area vary widely in their potential for major land uses, such as cropland, pasture, rangeland, woodland, wildlife habitat, and urban development. About 70 percent of the land area is used for rangeland and related purposes, and about 30 percent is used for woodland and related purposes. Extensive changes in land use are not expected in the foreseeable future.

General soil map units 1 to 3 have the highest potential for forage production because they are near water sources. On some of the soils in these units, the seasonal high water table and accumulations of salt and sodium are limitations. Map units 4 to 18 and map units 25 and 26 are

used extensively for range. In general, the main limitation in areas of units 4 to 10 is inadequate precipitation. Some of the soils in these units are salt and sodium affected. Also, some of the units have large areas of Playas, which are periodically ponded. The main limitations in map units 11 to 14 are inadequate precipitation and the depth to a hardpan, which limits the rooting depth. Map units 25 and 26 are limited by the slope and by surface rock fragments. Also, some of the soils in these units are limited by a shallow or moderate depth to bedrock.

Map units 19 to 24 and map units 27 and 28 are used for range and woodland. The main limitations in areas of these units are a very shallow, shallow, or moderate depth

to bedrock; surface rock fragments; and the slope. On some of the soils in these units, singleleaf pinyon and Utah juniper are cut for firewood, fenceposts, and Christmas trees.

Almost of the all land in the survey area provides habitat for one or more kinds of wildlife. The openland wildlife common in the area includes sage grouse, chukar, Hungarian partridge, cottontail rabbit, jackrabbit, coyote, and badger. Mule deer are in areas of both openland and woodland habitat. Elk are common in local areas of both openland and woodland habitat. The water, food, and cover provided by native meadows and pastures attract wildlife.

Detailed Soil Map Units

The map units on the detailed maps at the back of this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. The soil properties and characteristics described can be used to plan the management needed for those or other uses. More information on each map unit, or soil, is given under the headings "Use and Management of the Soils" and "Soil Properties."

A map unit delineation on a map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils or miscellaneous areas. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils and miscellaneous areas are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some "included" areas that belong to other taxonomic classes.

The presence of included areas in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into segments that have similar use and management requirements. The delineation of such landscape segments on the map provides sufficient information for the development of resource plans, but if intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Some delineations joining the soil survey of the Diamond Valley area have soil names, map unit components, or physiographic positions that are not exactly the same between the two survey areas. Differences are primarily the result of a better understanding of soil relationships. They have little or no effect on the use of these surveys for management purposes.

Soils that have profiles that are almost alike make up a *soil series*. The soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of one series can differ in texture of the upper layer or of the underlying layers. They also can differ in slope, stoniness, salinity, wetness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Duffer silt loam, 0 to 2 percent slopes, is a phase of the Duffer series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or associations.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Stewval-Rock outcrop complex is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. The Palinor-Shabliss-Tulase association is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Playas is an example. Some areas that are too small to be delineated are identified by special symbols on the soil maps.

The detailed soil map units identified within the survey area reflect the various relationships of soils with component parts of the landscape. These relationships are illustrated in figures 7 and 8. These figures indicate, in a three-dimensional representation, the soil-physiographic relationships typical of the area.

Figure 7 shows how some of the delineations appear throughout the various segments of the landscape. Each map unit has one or more major soil components and

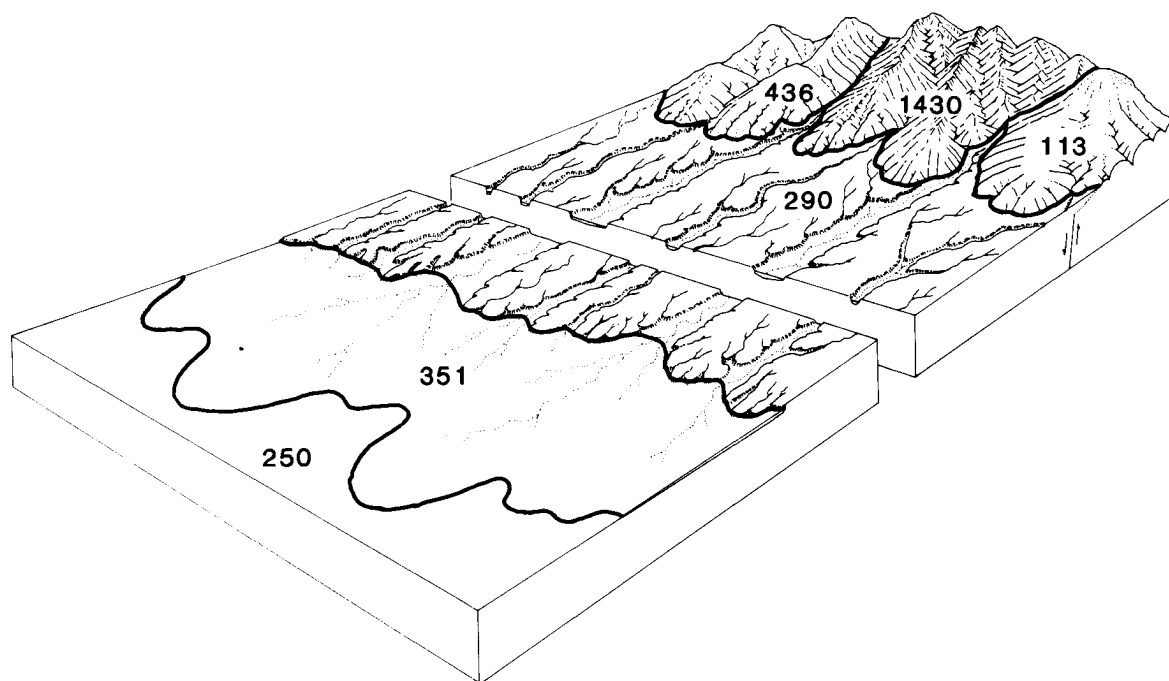


Figure 7.—Typical arrangement of detailed map units on a bolson landscape. Unit 250 is on lake plains, unit 351 is on inset fans and fan skirts, unit 290 is on the upper part of fan piedmonts, unit 113 is on hills, and units 436 and 1430 are on mountains.

generally has several contrasting inclusions. Figure 8 shows the physiographic position of each major soil component identified within the respective map units.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables (see "Summary of Tables") give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

The following paragraphs explain some of the headings used in the map unit descriptions.

Map unit setting is given for the entire map unit. The landscape positions given under this heading generally are broader than those given for each major component.

Composition is given for the components identified in the name of the map unit as well as for the contrasting inclusions. Inclusions can either be similar or contrasting. Similar inclusions are components that differ from the components for which the unit is named but that for purposes of use and management can be considered to be comparable to the named components. In the "Composition" section, a single percentage is provided for

a named soil and similar inclusions because their use and management are similar. Contrasting inclusions are components that differ so significantly from the components for which the unit is named that they would have different use and management if they were extensive enough to be managed separately. For most uses, contrasting inclusions have limited effect on use and management. Inclusions generally are in small areas, and they could not be mapped separately because of the scale used. Some small areas of strongly contrasting inclusions are identified by a special symbol on the detailed soil maps. A few inclusions may not have been observed and consequently are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the inclusions on the landscape.

A description of the characteristics of the soils in the map unit follows the description of composition. Interpretive groups are given at the end of the map unit descriptions. They include the range site and capability classification for each major component and the range site for each contrasting inclusion.

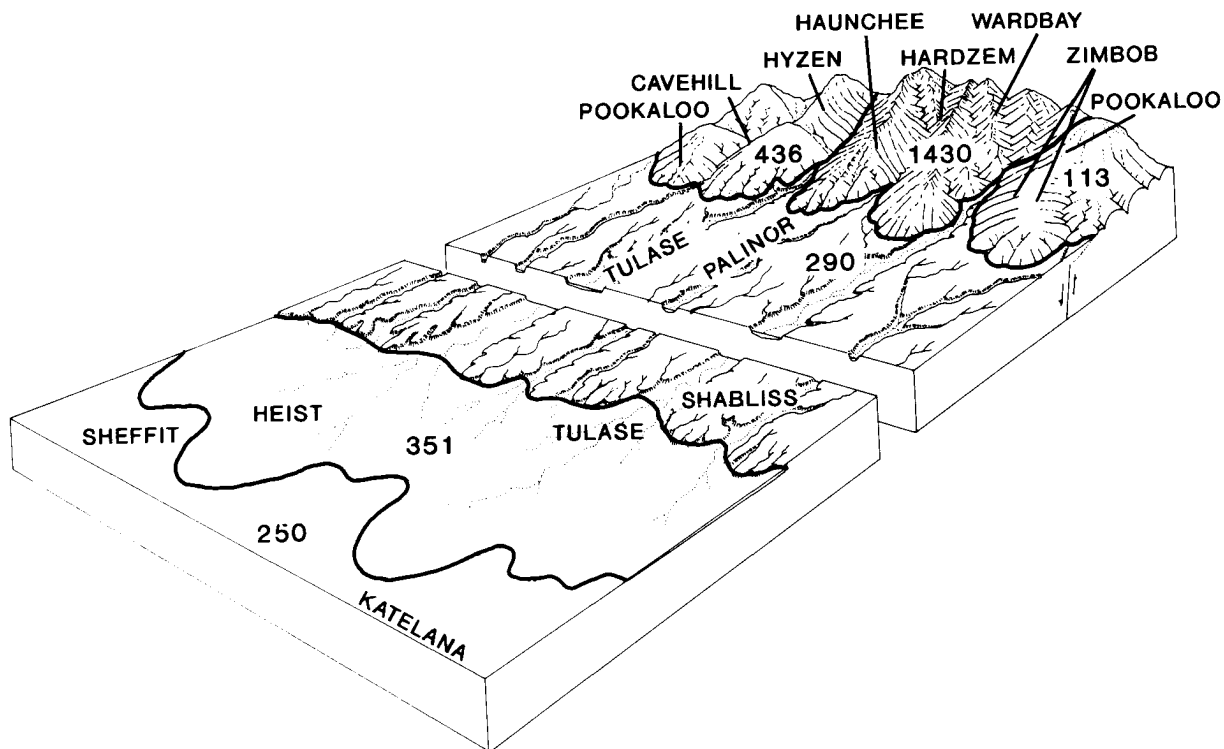


Figure 8.—The location of individual map unit components on a bolson landscape.

Map Unit Descriptions

100—Pookaloo-Cavehill-Rock outcrop association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pookaloo very gravelly loam, 15 to 50 percent slopes—40 percent
- Cavehill very gravelly silt loam, 15 to 50 percent slopes—30 percent
- Rock outcrop—15 percent

Contrasting inclusions:

- Inclusion 1: Typic Calcixerolls gravelly silt loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—5 percent

- Inclusion 3: Xine gravelly loam, 4 to 15 percent slopes—3 percent
- Inclusion 4: Lithic Haploxerolls very gravelly loam, 8 to 15 percent slopes—2 percent

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorrhids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1;
wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal,
carbonatic, frigid

Position on landscape: North-facing side slopes of
mountains

Parent material: Residuum and colluvium derived from
limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah
juniper, mountain big sagebrush, bluebunch
wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles,
20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—2;
wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of
mountains

Kind of rock: Limestone and dolomite

Contrasting Inclusions**Inclusion 1**

Classification: Typic Calcixerolls, loamy-skeletal,
carbonatic, frigid

Position on landscape: North- and east-facing side slopes
of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah
juniper, mountain big sagebrush, bluebunch
wheatgrass

Inclusion 2

Classification: Lithic Xerollic Calciorthids, loamy-skeletal,
carbonatic, mesic

Position on landscape: Side slopes of mountains
Distinctive present vegetation: Black sagebrush,
 bluebunch wheatgrass

Inclusion 3

Classification: Aridic Calcixerolls, loamy-skeletal, mixed,
 frigid
Position on landscape: Concave, north-facing side slopes
 of mountains
Distinctive present vegetation: Mountain big sagebrush,
 bluebunch wheatgrass

Inclusion 4

Classification: Lithic Haploxerolls, loamy-skeletal,
 carbonatic, frigid
Position on landscape: Side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush,
 bluebunch wheatgrass

Interpretive Groups

Capability classification: Pookaloo and Cavehill soils—
 VIIIs, nonirrigated; Rock outcrop—VIIIIs
Range site: Pookaloo soil—028BY060NV; Cavehill soil—
 028BY062NV; Rock outcrop—none; Inclusion 1—
 028BY062NV; Inclusion 2—028BY008NV; Inclusion
 3—028BY088NV; Inclusion 4—028BY079NV

104—Pookaloo-Zimbob-Hyzen association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Pookaloo very gravelly loam, 8 to 30 percent slopes—50 percent
- Zimbob very gravelly loam, 8 to 30 percent slopes—20 percent
- Hyzen extremely stony loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 2 to 8 percent slopes—10 percent
- Inclusion 2: Rock outcrop—5 percent

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal,
 carbonatic, mesic
Position on landscape: North-facing side slopes of hills
Parent material: Residuum and colluvium derived from
 limestone and dolomite
Slope range: 8 to 30 percent
Elevation: 6,500 to 7,800 feet
Dominant present vegetation: Singleleaf pinyon, Utah

juniper, mountain big sagebrush, bluebunch
 wheatgrass

Climatic Data

Average annual precipitation: About 13 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches
Texture: Very gravelly silt loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 19 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60
 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 2.5 inches
Water-supplying capacity: 10 to 13 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—1;
 wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal,
 carbonatic, mesic
Position on landscape: South-facing side slopes of hills
Parent material: Residuum and colluvium derived from
 limestone and dolomite
Slope range: 8 to 30 percent
Elevation: 6,500 to 7,800 feet
Dominant present vegetation: Black sagebrush, Indian
 ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 45 degrees F
Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 7 to 10 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1;
 wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal,
 carbonatic, frigid
Position on landscape: Side slopes of hills
Parent material: Residuum and colluvium derived from
 limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 6,500 to 7,800 feet
Dominant present vegetation: Littleleaf
 mountainmahogany, black sagebrush, Scribner
 needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles,
 10 percent; pebbles, 45 percent

Depth: 0 to 1 inch
Texture: Extremely stony loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 6 inches
Texture: Extremely stony loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 6 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 6 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1;
 wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Durixerollic Calciorthids, loamy-skeletal,
 mixed, mesic
Position on landscape: Alluvial fans adjacent to hills
Distinctive present vegetation: Wyoming big sagebrush,
 needleandthread

Inclusion 2

Position on landscape: Crests and side slopes of hills
Distinctive present vegetation: None

Interpretive Groups

Capability classification: Pookaloo, Zimbob, and Hyzen soils—VIIIs, nonirrigated

Range site: Pookaloo soil—028BY060NV; Zimbob soil—028BY016NV; Hyzen soil—028BY066NV; Inclusion 1—028BY010NV; Inclusion 2—none

108—Pookaloo-Tecomar-Rock outcrop association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pookaloo very gravelly loam, 15 to 50 percent slopes—40 percent
- Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—30 percent
- Rock outcrop—15 percent

Contrasting inclusions:

- Inclusion 1: Hyzen extremely stony loam, 15 to 50 percent slopes—8 percent
- Inclusion 2: Onkeyo very gravelly silt loam, 15 to 50 percent slopes—6 percent
- Inclusion 3: Selti very stony coarse sandy loam, 4 to 15 percent slopes—1 percent

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tecomar Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,800 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Extremely gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 18 inches

Texture: Extremely cobbly silt loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of mountains

Kind of rock: Limestone and dolomite

Contrasting Inclusions

Inclusion 1

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Littleleaf mountainmahogany, black sagebrush, Scribner needlegrass

Inclusion 2

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Valley fans of mountains

Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Interpretive Groups

Capability classification: Pookaloo and Tecomar soils—VIIIs, nonirrigated; Rock outcrop—VIIIIs

Range site: Pookaloo soil—028BY060NV; Tecomar soil—028BY008NV; Rock outcrop—none; Inclusion 1—028BY066NV; Inclusion 2—028BY079NV; Inclusion 3—028BY007NV

109—Hyzen-Cavehill association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Hyzen extremely stony loam, 15 to 50 percent slopes—35 percent
- Cavehill very gravelly silt loam, 15 to 50 percent slopes—30 percent
- Hyzen extremely stony loam, dry, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—7 percent
- Inclusion 2: Durixerollic Calciorthids gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—3 percent

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,000 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 45 percent

Depth: 0 to 2 inches

Texture: Extremely stony loam

Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 12 inches
Texture: Extremely stony loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 6 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1;
 wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal,
 carbonatic, frigid
Position on landscape: North-facing side slopes of
 mountains
Parent material: Residuum and colluvium derived from
 limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 7,000 to 8,000 feet
Dominant present vegetation: Singleleaf pinyon, Utah
 juniper, mountain big sagebrush, bluebunch
 wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles,
 20 percent; pebbles, 60 percent
Depth: 0 to 15 inches
Texture: Very gravelly silt loam

Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 27 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 11 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.15; T value—2;
 wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Dry Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal,
 carbonatic, frigid
Position on landscape: Side slopes of mountains
Parent material: Residuum and colluvium derived from
 limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 7,000 to 8,000 feet
Dominant present vegetation: Littleleaf
 mountainmahogany, black sagebrush, Scribner
 needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles,
 10 percent; pebbles, 45 percent
Depth: 0 to 1 inch
Texture: Extremely stony loam
Structure: Platy

Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 6 inches
Texture: Extremely stony loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 6 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 6 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Valley fans of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Hyzen and Cavehill soils—VII_s, nonirrigated

Range site: Hyzen soil—028BY060NV; Cavehill soil—028BY062NV; the dry Hyzen soil—028BY066NV;

Inclusion 1—none; Inclusion 2—028BY060NV;
 Inclusion 3—028BY008NV

110—Zimbob association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Zimbob very gravelly loam, 8 to 30 percent slopes—70 percent
- Zimbob very gravelly loam, 30 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Lithic Xeric Torriorthents very gravelly loam, 15 to 50 percent slopes—10 percent
- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—2 percent
- Inclusion 3: Durixerollic Calciorthids gravelly loam, 4 to 15 percent slopes—2 percent
- Inclusion 4: Rock outcrop—1 percent

Characteristics of the Less Sloping Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 8 to 30 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 7 to 10 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1;
 wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Steep Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic
Position on landscape: Side slopes of hills
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 30 to 50 percent
Elevation: 6,000 to 7,000 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 45 degrees F
Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent
Depth: 0 to 1 inch
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 1 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable

Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 7 to 10 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1;
 wind erodibility group—6
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Side slopes of hills
Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Alluvial fans adjacent to hills
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: Alluvial fans adjacent to hills
Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Position on landscape: Crests and side slopes of hills
Distinctive present vegetation: None

Interpretive Groups

Capability classification: Zimbob soils—VIIIs, nonirrigated
Range site: The less sloping Zimbob soil—028BY016NV; the steep Zimbob soil—028BY016NV; Inclusion 1—028BY059NV; Inclusion 2—028BY010NV; Inclusion 3—028BY060NV; Inclusion 4—none

111—Zimbob-Hyzen-Rock outcrop association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Zimbob very gravelly loam, 30 to 75 percent slopes—40 percent
- Hyzen extremely stony loam, 15 to 50 percent slopes—25 percent
- Rock outcrop—20 percent

Contrasting inclusions:

- Inclusion 1: Lithic Xeric Torriorthents very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Lithic Haploxerolls very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Pookaloo very gravelly loam, 15 to 50 percent slopes—5 percent

Characteristics of the Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests and side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 7,000 to 7,600 feet

Dominant present vegetation: Utah juniper, black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 4 to 10 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 7 to 10 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,600 feet

Dominant present vegetation: Littleleaf mountainmahogany, black sagebrush, Scribner needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 45 percent

Depth: 0 to 1 inch

Texture: Extremely stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 6 inches

Texture: Extremely stony loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 6 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 6 to 9 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of hills

Kind of rock: Limestone and dolomite

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Side slopes of hills

Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of hills

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: North-facing side slopes of hills

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Zimbob and Hyzen soils—VIIIs, nonirrigated; Rock outcrop—VIIIIs

Range site: Zimbob soil—028BY059NV; Hyzen soil—028BY066NV; Rock outcrop—none; Inclusion 1—028BY080NV; Inclusion 2—028BY008NV; Inclusion 3—028BY060NV

113—Zimbob-Pookaloo association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Zimbob extremely gravelly loam, 15 to 50 percent slopes—40 percent
- Zimbob very gravelly loam, 15 to 50 percent slopes—30 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Durixerollic Calciorthids gravelly loam, 2 to 8 percent slopes—6 percent
- Inclusion 2: Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Hyzen extremely stony loam, 15 to 50 percent slopes—2 percent
- Inclusion 4: Rock outcrop—2 percent

Characteristics of the Extremely Gravelly Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,600 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch

Texture: Extremely gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 7 to 10 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Very Gravelly Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests and side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,600 feet

Dominant present vegetation: Utah juniper, black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 4 to 10 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 7 to 10 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: North-facing side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,600 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Alluvial fans adjacent to hills

Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 2

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of hills

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Side slopes of hills

Distinctive present vegetation: Littleleaf mountainmahogany, black sagebrush, Scribner needlegrass

Inclusion 4

Position on landscape: Crests and side slopes of hills

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Zimbob and Pookaloo soils—VIIIs, nonirrigated

Range site: The extremely gravelly Zimbob soil—028BY016NV; the very gravelly Zimbob soil—028BY059NV; Pookaloo soil—028BY060NV; Inclusion 1—028BY094NV; Inclusion 2—028BY008NV; Inclusion 3—028BY066NV; Inclusion 4—none

119—Zimbob-Palinor association

Map Unit Setting

Position on landscape: Hills and fan piedmonts

Composition

Major components:

- Zimbob very gravelly loam, 8 to 30 percent slopes—45 percent
- Palinor gravelly loam, 8 to 30 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Lithic Xeric Torriorthents very gravelly loam, 8 to 30 percent slopes—8 percent
- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Pookaloo very gravelly loam, 8 to 30 percent slopes—2 percent
- Inclusion 4: Urmafot very gravelly loam, 4 to 15 percent slopes—1 percent

Characteristics of the Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests and side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 8 to 30 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 7 to 10 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants
Parent material: Alluvium derived from limestone and dolomite
Slope range: 8 to 30 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent
Depth: 0 to 10 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 10 to 18 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches
Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Side slopes of hills
Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass

Inclusion 2

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: North-facing side slopes of hills
Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Upper part of fan piedmont remnants
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Zimbob soil—IIs, Palinor soil—Ile, nonirrigated

Range site: Zimbob soil—028BY016NV; Palinor soil—028BY011NV; Inclusion 1—028BY083NV; Inclusion 2—028BY010NV; Inclusion 3—028BY060NV; Inclusion 4—028BY008NV

120—Tecomar-Pookaloo-Zimbob association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—50 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—20 percent
- Zimbob very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Zimbob very gravelly loam, 15 to 50 percent slopes—7 percent
- Inclusion 2: Pyrat gravelly sandy loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Rock outcrop—3 percent
- Inclusion 4: Durixerollic Calciorthids gravelly loam, 2 to 8 percent slopes—1 percent

Characteristics of the Tecomar Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Upper, south-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,200 to 7,600 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Extremely gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 18 inches

Texture: Extremely cobbly silt loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,600 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower, south-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,200 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 7 to 10 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower mountain crests and side slopes

Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Alluvial fans adjacent to hills

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 4

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Valley fans of mountains

Distinctive present vegetation: Wyoming big sagebrush, spiny hopsage, Indian ricegrass

Interpretive Groups

Capability classification: Tecomar, Pookaloo, and Zimbob soils—VIIIs, nonirrigated

Range site: Tecomar soil—028BY008NV; Pookaloo soil—028BY060NV; Zimbob soil—028BY016NV; Inclusion

1—028BY059NV; Inclusion 2—028BY010NV;
Inclusion 3—none; Inclusion 4—028BY052NV

124—Tecomar-Pookaloo association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Tecomar extremely gravelly silt loam, moist, 15 to 50 percent slopes—35 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—30 percent
- Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—5 percent
- Inclusion 2: Hyzen extremely stony loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Lithic Calciorthids very gravelly loam, 4 to 15 percent slopes—3 percent
- Inclusion 4: Typic Calciorthids gravelly sandy loam, 4 to 15 percent slopes—2 percent

Characteristics of the Moist Tecomar Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Upper, south-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,400 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Depth: 0 to 3 inches

Texture: Extremely gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches

Texture: Extremely cobbly silt loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tecomar Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower, south-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,400 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Extremely gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 18 inches

Texture: Extremely cobbly silt loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Littleleaf mountainmahogany, black sagebrush, Scribner needlegrass

Inclusion 3

Classification: Lithic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Typic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Alluvial fans adjacent to hills

Distinctive present vegetation: Big sagebrush, Indian ricegrass

Interpretive Groups

Capability classification: Tecomar and Pookaloo soils—VIIIs, nonirrigated

Range site: The moist Tecomar soil—028BY090NV; Pookaloo soil—028BY060NV; Tecomar soil—028BY008NV; Inclusion 1—none; Inclusion 2—028BY066NV; Inclusion 3—028BY006NV; Inclusion 4—028BY094NV

126—Tecomar-Xine-Pookaloo association**Map Unit Setting**

Position on landscape: Mountains

Composition

Major components:

- Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—35 percent
- Xine very gravelly loam, 15 to 50 percent slopes—30 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Hyzen extremely stony loam, 15 to 50 percent slopes—8 percent
- Inclusion 2: Haunchee very cobbly loam, 15 to 50 percent slopes—3 percent
- Inclusion 3: Tulase silt loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Zimbob very gravelly loam, 8 to 30 percent slopes—2 percent

Characteristics of the Tecomar Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Extremely gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 18 inches

Texture: Extremely cobbly silt loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Xine Soil

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave, north-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 to 35 inches

Texture: Very cobbly loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 35 inches

Texture: Weathered limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 3.0 to 4.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthis, loamy-skeletal, carbonatic, mesic

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Upper, north-facing side slopes of mountains

Distinctive present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Tecomar, Xine, and Pookaloo soils—VIIIs, nonirrigated

Range site: Tecomar soil—028BY008NV; Xine soil—028BY088NV; Pookaloo soil—028BY060NV; Inclusion 1—028BY060NV; Inclusion 2—028BY032NV; Inclusion 3—028BY045NV; Inclusion 4—028BY016NV

160—Zerk-Heist-Tosser association

Map Unit Setting

Position on landscape: Beach plains

Composition

Major components:

- Zerk gravelly loam, 2 to 4 percent slopes—55 percent
- Heist silt loam, 2 to 4 percent slopes—15 percent
- Tosser loam, 2 to 8 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Linoyer very fine sandy loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Typic Calciorthids gravelly sandy loam, 2 to 8 percent slopes—3 percent
- Inclusion 3: Broyles very fine sandy loam, 0 to 4 percent slopes—1 percent
- Inclusion 4: Typic Torriorthents very gravelly sandy loam, 0 to 2 percent slopes—1 percent

Characteristics of the Zerk Soil

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Rapid

Available water capacity: 3.0 to 4.0 inches

Water-supplying capacity: 5 to 7.5 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 40 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 40 to 60 inches

Texture: Very fine sand

Structure: Single grained

Consistence: Loose

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tosser Soil

Classification: Xerollic Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 8 inches

Texture: Loam

Structure: Platy

Consistence: Soft, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 24 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 24 to 60 inches

Texture: Extremely gravelly loamy coarse sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Lagoons

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Typic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Beach plains

Distinctive present vegetation: Fourwing saltbush, spiny hopsage, Indian ricegrass

Inclusion 3

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Beach plains

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 4

Classification: Typic Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Beach plains

Distinctive present vegetation: Shadscale, squirreltail

Interpretive Groups

Capability classification: Zerk—Ve, irrigated; Zerk and Tosser—VIIIs, Heist—Ic, nonirrigated
Range site: Zerk—028BY075NV; Heist—028BY084NV; Tosser—028BY016NV; Inclusion 1—028BY013NV; Inclusion 2—028BY078NV; Inclusion 3—028BY017NV; Inclusion 4—028BY073NV

162—Broyles-Kunzler-Heist association

Map Unit Setting

Position on landscape: Fan skirts, stream terraces, and beach plains

Composition

Major components:

- Broyles very fine sandy loam, 2 to 4 percent slopes—45 percent
- Kunzler loam, 0 to 4 percent slopes—25 percent
- Heist silt loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Typic Torriorthents sandy loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Zerk gravelly loam, 2 to 4 percent slopes—5 percent
- Inclusion 3: Tulasie silt loam, 2 to 4 percent slopes—3 percent
- Inclusion 4: Sycomat sandy loam, 0 to 4 percent slopes—2 percent

Characteristics of the Broyles Soil

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Thin loess mantle over mixed loamy alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 12 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 8 mmhos per cm

Depth: 12 to 60 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.5 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Stream terraces

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches

Texture: Loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches
Texture: Sandy loam
Structure: Massive
Consistence: Hard, brittle
Reaction: Very strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 6.5 to 9.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Beach plains
Parent material: Mixed alluvium
Slope range: 2 to 4 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches
Texture: Fine sandy loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches
Texture: Gravelly fine sandy loam

Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid
Available water capacity: 6.0 to 7.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Fan skirts
Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic
Position on landscape: Fan skirts
Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Fan skirts
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Fan skirts
Distinctive present vegetation: Black greasewood, shadscale, bottlebrush squirreltail

Interpretive Groups

Capability classification: Broyles soil—Ie, irrigated; Broyles and Kunzler soils—Ilc, Heist soil—Ic, nonirrigated
Range site: Broyles soil—028BY075NV; Kunzler soil—028BY028NV; Heist soil—028BY084NV; Inclusion 1—

028BY009NV; Inclusion 2—028BY075NV; Inclusion 3—028BY045NV; Inclusion 4—028BY074NV

166—Tosser-Pyrat-Linoyer association

Map Unit Setting

Position on landscape: Beach plains and fan skirts

Composition

Major components:

- Tosser loam, 0 to 4 percent slopes—40 percent
- Pyrat gravelly sandy loam, 0 to 4 percent slopes—30 percent
- Linoyer very fine sandy loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Typic Torriorthents silty clay loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Kunzler silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Heist silt loam, 2 to 4 percent slopes—3 percent
- Inclusion 4: Tulase silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Tosser Soil

Classification: Xerollic Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 8 inches

Texture: Loam

Structure: Platy

Consistence: Soft, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 24 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 24 to 60 inches

Texture: Extremely gravelly loamy coarse sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5;
wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed
(calcareous), mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 11.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5;
wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Typic Torriorthents, fine-loamy, mixed
(calcareous), mesic

Position on landscape: Lagoons

Distinctive present vegetation: Shadscale, squirreltail

Inclusion 2

Classification: Durixerollic Calciorthids, coarse-loamy,
mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Wyoming big sagebrush,
squirreltail, bluegrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed
(calcareous), mesic

Position on landscape: Lagoons

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Linoyer soil—Ie, irrigated; Tosser and Pyrat soils—VIIs, Linoyer soil—Ie, nonirrigated

Range site: Tosser soil—028BY016NV; Pyrat soil—028BY010NV; Linoyer soil—028BY013NV; Inclusion 1—028BY073NV; Inclusion 2—028BY056NV; Inclusion 3—028BY084NV; Inclusion 4—028BY045NV

170—Blimo-Hessing-Zerk association

Map Unit Setting

Position on landscape: Beach plains

Composition

Major components:

- Blimo gravelly loam, 0 to 2 percent slopes—35 percent
- Hessing silt loam, 0 to 4 percent slopes—30 percent
- Zerk gravelly loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Heist silt loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Sheffit fine sand, 0 to 2 percent slopes—5 percent
- Inclusion 3: Sheffit silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 4: Typic Torripsamments fine sand, 2 to 8 percent slopes—2 percent

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Wyoming big sagebrush, western wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.5 to 7.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Hessing Soil

Classification: Typic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Beach plains

Parent material: Loess and silty alluvium over mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 4 to 15 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 15 to 31 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Depth: 31 to 60 inches

Texture: Stratified extremely gravelly coarse sand to
extremely gravelly sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 5.5 to 7.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—3;
wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Characteristics of the Zerk Soil

Classification: Duric Calciorthids, sandy-skeletal, mixed,
mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate over rapid

Available water capacity: 3.0 to 4.0 inches

Water-supplying capacity: 5 to 7.5 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.20; T value—2;
wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, coarse-loamy, mixed
(calcareous), mesic

Position on landscape: Beach plains

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Xeric Torriorthents, fine, montmorillonitic
(calcareous), mesic

Position on landscape: Lagoons adjacent to dunes

Distinctive present vegetation: Big sagebrush,
needleandthread, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lagoons

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 4

Classification: Typic Torripsamments, mixed, mesic

Position on landscape: Dunes adjacent to beach plains

Distinctive present vegetation: Inland saltgrass, sedge, wildrye

Interpretive Groups

Capability classification: Hessing soil—Is, Zerk soil—Ve, irrigated; Blimo soil—Is, Hessing and Zerk soils—VIIIs, nonirrigated

Range site: Blimo soil—028BY014NV; Hessing soil—028BY017NV; Zerk soil—028BY075NV; Inclusion 1—028BY084NV; Inclusion 2—028BY005NV; Inclusion 3—028BY028NV; Inclusion 4—028BY012NV

173—Tulase-Yody-Heist association**Map Unit Setting**

Position on landscape: Fan piedmonts and fan skirts

Composition

Major components:

- Tulase silt loam, 0 to 4 percent slopes—35 percent
- Yody gravelly sandy loam, 2 to 4 percent slopes—30 percent
- Heist silt loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Durixerollic Camborthids gravelly loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Palinoz gravelly loam, 2 to 4 percent slopes—5 percent
- Inclusion 3: Xerollic Haplargids very gravelly loam, 2 to 4 percent slopes—5 percent

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts and inset fans

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 4 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 16 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 16 to 38 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 38 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Tulase soil—Ie, Yody soil—Ile, irrigated; Tulase and Heist soils—Ic, Yody soil—Ic, nonirrigated

Range site: Tulase soil—028BY045NV; Yody soil—028BY086NV; Heist soil—028BY084NV; Inclusion 1—028BY010NV; Inclusion 2—028BY011NV; Inclusion 3—028BY010NV

174—Blimo-Pyrat association

Map Unit Setting

Position on landscape: Beach plains

Composition

Major components:

- Blimo gravelly loam, 0 to 4 percent slopes—50 percent
- Pyrat gravelly sandy loam, 0 to 4 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 0 to 4 percent slopes—10 percent
- Inclusion 2: Durixerollic Calciorthids gravelly loam, 0 to 2 percent slopes—5 percent

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 4.5 to 7.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches
Texture: Very gravelly sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches
Texture: Very gravelly loam
Structure: Massive
Consistence: Very hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches
Texture: Very gravelly sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches
Texture: Extremely gravelly loamy sand
Structure: Massive
Consistence: Hard, very friable
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Beach plains adjacent to lake plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Beach plains

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Blimo soil—Is, Pyrat soil—IIs, nonirrigated

Range site: Blimo soil—025XY019NV; Pyrat soil—025XY019NV; Inclusion 1—028BY028NV; Inclusion 2—028BY010NV

179—Tulase-Pern association

Map Unit Setting

Position on landscape: Inset fans

Composition

Major components:

- Tulase silt loam, 2 to 4 percent slopes—60 percent
- Pern silt loam, 0 to 2 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 2 to 4 percent slopes—8 percent
- Inclusion 2: Xerollic Calciorthids gravelly sandy loam, 2 to 4 percent slopes—1 percent
- Inclusion 3: Devilsgait silt loam, 0 to 2 percent slopes—1 percent

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Pern Soil

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic
Position on landscape: Inset fans
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Basin big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 14 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 20 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 20 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: Rare
Permeability: Moderate
Available water capacity: 11.5 to 12.5 inches
Water-supplying capacity: 12 to 13 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 3

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic
Position on landscape: Inset fans adjacent to stream channels
Distinctive present vegetation: Bluegrass, sedge, rush

Interpretive Groups

Capability classification: Tulase soil—Ie, Pern soil—Ilc, irrigated; Tulase and Pern soils—Ic, nonirrigated
Range site: Tulase soil—028BY045NV; Pern soil—028BY003NV; Inclusion 1—028BY010NV; Inclusion 2—028BY028NV; Inclusion 3—028BY001NV

181—Pyrat-Cowgil-Broyles association

Map Unit Setting

Position on landscape: Fan piedmonts and fan skirts

Composition

Major components:

- Pyrat gravelly sandy loam, 2 to 8 percent slopes—45 percent
- Cowgil very gravelly sandy loam, 2 to 8 percent slopes—25 percent
- Broyles very fine sandy loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Broyles very fine sandy loam, 2 to 4 percent slopes—10 percent
- Inclusion 2: Zerk gravelly loam, 2 to 4 percent slopes—5 percent

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 5,900 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cowgil Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 5,900 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 4 inches

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 21 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 61 inches

Texture: Very gravelly loamy sand

Structure: Single grained

Consistence: Loose

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Broyles Soil

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Thin loess mantle over mixed loamy alluvium

Slope range: 2 to 4 percent

Elevation: 5,900 to 6,100 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 12 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 8 mmhos per cm

Depth: 12 to 60 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.5 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Broyles soil—Ile, irrigated; Pyrat and Cowgil soils—VIIIs, Broyles soil—VIIc, nonirrigated

Range site: Pyrat soil—028BY010NV; Cowgil soil—028BY010NV; Broyles soil—028BY075NV; Inclusion 1—028BY017NV; Inclusion 2—028BY075NV

185—Pyrat-Heist-Tulase association

Map Unit Setting

Position on landscape: Fan skirts and beach plains

Composition

Major components:

- Pyrat gravelly sandy loam, 2 to 8 percent slopes—35 percent
- Heist silt loam, 0 to 4 percent slopes—30 percent
- Tulase silt loam, 0 to 4 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Palinor gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 2: Linoyer very fine sandy loam, 0 to 2 percent slopes—2 percent
- Inclusion 3: Zerk gravelly loam, 2 to 4 percent slopes—2 percent
- Inclusion 4: Tosser loam, 2 to 4 percent slopes—2 percent

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 5 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 70 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants adjacent to fan skirts

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 3

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 4

Classification: Xerollic Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Tulase soil—Ie, irrigated; Pyrat soil—IIs, Heist and Tulase soils—Ic, nonirrigated

Range site: Pyrat soil—028BY010NV; Heist soil—

028BY084NV; Tulase soil—028BY045NV; Inclusion 1—028BY011NV; Inclusion 2—028BY013NV; Inclusion 3—028BY075NV; Inclusion 4—028BY016NV

189—Pyrat-Linoyer association

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major components:

- Pyrat gravelly sandy loam, 2 to 8 percent slopes—70 percent
- Linoyer very fine sandy loam, 0 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Sheffit silt loam, 0 to 4 percent slopes—3 percent
- Inclusion 2: Shabliss gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Blimo gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 4: Wintermute gravelly silt loam, 2 to 8 percent slopes—2 percent

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 5,900 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,900 to 6,500 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 11.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Fan skirts adjacent to lake plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Inclusion 4

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Linoyer soil—Ile, irrigated; Pyrat soil—VIIIs, Linoyer soil—Ie, nonirrigated

Range site: Pyrat soil—028BY010NV; Linoyer soil—028BY013NV; Inclusion 1—028BY028NV; Inclusion 2—028BY080NV; Inclusion 3—028BY014NV; Inclusion 4—028BY075NV

190—Cowgil-Yody-Fax association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Cowgil very gravelly sandy loam, 4 to 15 percent slopes—35 percent
- Yody gravelly sandy loam, 2 to 8 percent slopes—30 percent
- Fax very cobbly coarse sandy loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Camborthids very gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Aridic Argixerolls gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Pachic Haploxerolls gravelly silt loam, 2 to 8 percent slopes—5 percent

Characteristics of the Cowgil Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 4 inches

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 21 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 61 inches

Texture: Very gravelly loamy sand

Structure: Single grained

Consistence: Loose

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 16 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 16 to 38 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 38 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Fax Soil

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Upper fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 4 to 15 percent

Elevation: 6,200 to 6,800 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 15 percent

Depth: 0 to 3 inches

Texture: Very cobbly coarse sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 22 inches

Texture: Very gravelly sandy clay loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 22 to 48 inches

Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 20 to 36 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xerollic Camborthids, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Pachic Haploxerolls, fine-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Yody soil—Ile, irrigated; Cowgil and Fax soils—VIIIs, Yody soil—IIs, nonirrigated

Range site: Cowgil soil—028BY010NV; Yody soil—028BY086NV; Fax soil—028BY007NV; Inclusion 1—028BY010NV; Inclusion 2—028BY015NV; Inclusion 3—028BY003NV

192—Cowgil-Yody association**Map Unit Setting**

Position on landscape: Fan piedmonts

Composition

Major components:

- Cowgil very gravelly sandy loam, 0 to 4 percent slopes—60 percent
- Yody gravelly sandy loam, 0 to 2 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Heist silt loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Raph loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Broland very gravelly loam, 2 to 4 percent slopes—5 percent

Characteristics of the Cowgil Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 4 inches

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 21 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 61 inches

Texture: Very gravelly loamy sand

Structure: Single grained

Consistence: Loose

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Typic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 3

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Interpretive Groups

Capability classification: Yody soil—IIs, irrigated; Cowgil soil—IIs, Yody soil—IIs, nonirrigated

Range site: Cowgil soil—028BY010NV; Yody soil—028BY010NV; Inclusion 1—028BY084NV; Inclusion 2—028BY017NV; Inclusion 3—028BY089NV

201—Hyzen-Pookaloo-Tecomar association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Hyzen extremely stony loam, 15 to 50 percent slopes—45 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—25 percent
- Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—10 percent
- Inclusion 2: Zimboob very gravelly loam, 8 to 30 percent slopes—3 percent
- Inclusion 3: Pyrat gravelly sandy loam, 2 to 8 percent slopes—1 percent
- Inclusion 4: Pookaloo very gravelly loam, 8 to 30 percent slopes—1 percent

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Littleleaf mountainmahogany, black sagebrush, Scribner needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 45 percent

Depth: 0 to 1 inch

Texture: Extremely stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 6 inches

Texture: Extremely stony loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 6 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 6 to 9 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tecomar Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Extremely gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 18 inches

Texture: Extremely cobbly silt loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Valley fans of mountains

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Hyzen, Pookaloo, and Tecomar soils—VIIIs, nonirrigated

Range site: Hyzen soil—028BY066NV; Pookaloo soil—028BY060NV; Tecomar soil—028BY008NV; Inclusion 1—none; Inclusion 2—028BY016NV; Inclusion 3—028BY010NV; Inclusion 4—028BY060NV

205—Hyzen-Hardzem-Rock outcrop association**Map Unit Setting**

Position on landscape: Mountains

Composition

Major components:

- Hyzen extremely stony loam, 50 to 75 percent slopes—40 percent
- Hardzem channery loam, 50 to 75 percent slopes—30 percent
- Rock outcrop—15 percent

Contrasting inclusions:

- Inclusion 1: Pookaloo very gravelly loam, 30 to 75 percent slopes—10 percent
- Inclusion 2: Tecomar extremely gravelly silt loam, 30 to 75 percent slopes—5 percent

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 50 to 75 percent

Elevation: 8,500 to 9,500 feet

Dominant present vegetation: Littleleaf mountainmahogany, black sagebrush, Scribner needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 45 percent

Depth: 0 to 1 inch

Texture: Extremely stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 6 inches

Texture: Extremely stony loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 6 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 6 to 9 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hardzem Soil

Classification: Typic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and shale

Slope range: 50 to 75 percent

Elevation: 8,500 to 9,500 feet

Dominant present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 25 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 1 inch

Texture: Channery loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 21 inches

Texture: Extremely channery clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 52 inches

Texture: Fractured, weathered shale

Depth: 52 inches

Texture: Unweathered shale

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 12 to 18 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of mountains

Kind of rock: Limestone and dolomite

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Hyzen soil—IIs, Hardzem soil—Ile, nonirrigated; Rock outcrop—VIIIIs

Range site: Hyzen soil—028BY066NV; Hardzem soil—028BY063NV; Rock outcrop—none; Inclusion 1—028BY060NV; Inclusion 2—028BY008NV

220—Hutchley-Mclvey-Suak association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Hutchley very gravelly loam, 15 to 50 percent slopes—40 percent
- Mclvey very gravelly loam, 15 to 50 percent slopes—30 percent
- Suak very stony loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Roden very gravelly clay loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Upatad very gravelly silt loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Mclvey cobbly loam, 15 to 50 percent slopes—3 percent
- Inclusion 4: Rock outcrop—2 percent

Characteristics of the Hutchley Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Mountain crests

Parent material: Residuum derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Low sagebrush, black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 70 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 15 percent; pebbles, 45 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Very hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.3 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Side slopes of mountains

Parent material: Colluvium derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 5.0 to 7.5 inches

Water-supplying capacity: 10 to 18 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.05; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Suak Soil

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 35 percent

Depth: 0 to 10 inches

Texture: Very stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 10 to 25 inches

Texture: Extremely gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 25 inches

Texture: Quartzite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 inch to 2.0 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.05; T value—2; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Utah serviceberry, antelope bitterbrush, bluebunch wheatgrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Hutchley soil—Ie, McIvey and Suak soils—VIIIs, nonirrigated

Range site: Hutchley soil—028BY034NV; McIvey soil—028BY015NV; Suak soil—028BY032NV; Inclusion 1—028BY060NV; Inclusion 2—028BY093NV; Inclusion 3—028BY026NV; Inclusion 4—none

223—Hutchley-McIvey-Pookaloo association**Map Unit Setting**

Position on landscape: Mountains

Composition

Major components:

- Hutchley very gravelly loam, 15 to 50 percent slopes—40 percent
- McIvey very gravelly loam, 15 to 50 percent slopes—30 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Aridic Palexerolls gravelly silt loam, 8 to 30 percent slopes—10 percent
- Inclusion 2: Lithic Argixerolls very gravelly loam, 15 to 50 percent slopes—2 percent
- Inclusion 3: Rock outcrop—2 percent
- Inclusion 4: Aridic Argixerolls gravelly loam, 2 to 8 percent slopes—1 percent

Characteristics of the Hutchley Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Crests of mountains

Parent material: Residuum derived from conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,000 feet

Dominant present vegetation: Low sagebrush, black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 70 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 15 percent; pebbles, 45 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Very hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.3 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Side slopes of mountains

Parent material: Colluvium derived from conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 5.0 to 7.5 inches

Water-supplying capacity: 10 to 18 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.05; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Aridic Palexerolls, fine, montmorillonitic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 2

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, low sagebrush, bluebunch wheatgrass

Inclusion 3

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 4

Classification: Aridic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Hutchley soil—Ie, Mclvey and Pookaloo soils—VIIs, nonirrigated

Range site: Hutchley soil—028BY034NV; Mclvey soil—028BY015NV; Pookaloo soil—028BY060NV; Inclusion 1—028BY037NV; Inclusion 2—028BY064NV; Inclusion 3—none; Inclusion 4—028BY030NV

224—Hutchley-Mclvey-Segura association**Map Unit Setting**

Position on landscape: Mountains

Composition

Major components:

- Hutchley very gravelly loam, 15 to 50 percent slopes—35 percent
- Mclvey very gravelly loam, 15 to 50 percent slopes—30 percent
- Segura very cobbly loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—10 percent
- Inclusion 2: Aridic Palexerolls gravelly silt loam, 4 to 15 percent slopes—2 percent
- Inclusion 3: Pachic Argixerolls gravelly silt loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Devilsgait silt loam, 2 to 8 percent slopes—1 percent

Characteristics of the Hutchley Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Crests of mountains

Parent material: Residuum derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Low sagebrush, black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 70 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 15 percent; pebbles, 45 percent

Depth: 0 to 3 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches
Texture: Very gravelly clay loam
Structure: Subangular blocky
Consistence: Very hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 1.3 inches
Water-supplying capacity: 6.5 to 8 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Side slopes of mountains
Parent material: Colluvium derived from andesite, quartzite, or conglomerate
Slope range: 15 to 50 percent
Elevation: 7,500 to 8,500 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches
Texture: Very gravelly clay loam
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches
Texture: Extremely cobbly clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.05; T value—5; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid
Position on landscape: Side slopes of mountains
Parent material: Residuum and colluvium derived from andesite, quartzite, and conglomerate
Slope range: 15 to 50 percent
Elevation: 7,500 to 8,500 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 45 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches
Texture: Very cobbly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches
Texture: Sandy clay loam
Structure: Angular blocky
Consistence: Slightly hard, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 7 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 6.5 to 8 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Aridic Palexerolls, fine, montmorillonitic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Classification: Pachic Argixerolls, fine, montmorillonitic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Mountain big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Hutchley soil—Ie, McIvey and Segura soils—VIIs, nonirrigated

Range site: Hutchley soil—028BY034NV; McIvey soil—028BY015NV; Segura soil—028BY087NV; Inclusion 1—none; Inclusion 2—028BY037NV; Inclusion 3—028BY030NV; Inclusion 4—028BY024NV

226—Hutchley-Tusel-Suak association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Hutchley very gravelly loam, 15 to 50 percent slopes—35 percent
- Tusel cobbly loam, 15 to 50 percent slopes—25 percent
- Suak very stony loam, 8 to 30 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Lithic Argixerolls very gravelly loam, 4 to 15 percent slopes—6 percent
- Inclusion 2: Typic Argixerolls gravelly silt loam, 4 to 15 percent slopes—6 percent
- Inclusion 3: Rock outcrop—2 percent
- Inclusion 4: Devils gait silt loam, 2 to 8 percent slopes—1 percent

Characteristics of the Hutchley Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Crests of mountains

Parent material: Residuum derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 8,000 to 9,000 feet

Dominant present vegetation: Low sagebrush, black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 70 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 15 percent; pebbles, 45 percent

Depth: 0 to 3 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches
Texture: Very gravelly clay loam
Structure: Subangular blocky
Consistence: Very hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 1.3 inches
Water-supplying capacity: 6.5 to 8 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Tusel Soil

Classification: Argic Pachic Cryoborolls, loamy-skeletal, mixed
Position on landscape: North-facing side slopes of mountains
Parent material: Residuum and colluvium derived from andesite, quartzite, or conglomerate
Slope range: 15 to 50 percent
Elevation: 8,000 to 9,000 feet

Dominant present vegetation: Mountain brome, slender wheatgrass, Idaho fescue, antelope bitterbrush

Climatic Data

Average annual precipitation: About 17 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 13 inches
Texture: Cobbly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 13 to 42 inches
Texture: Extremely gravelly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 42 inches
Texture: Quartzite

Soil and Water Features

Depth to bedrock: 40 to 60 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 4.0 to 5.0 inches
Water-supplying capacity: 12 to 20 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.20; T value—3; wind erodibility group—6
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Suak Soil

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Side slopes of mountains
Parent material: Residuum and colluvium derived from andesite, quartzite, or conglomerate
Slope range: 8 to 30 percent
Elevation: 8,000 to 9,000 feet
Dominant present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 35 percent

Depth: 0 to 10 inches

Texture: Very stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 10 to 25 inches

Texture: Extremely gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 25 inches

Texture: Quartzite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 inch to 2.0 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.05; T value—2; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Idaho fescue, Webber ricegrass, low sagebrush, black sagebrush

Inclusion 2

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Idaho fescue, mountain brome, mountain big sagebrush

Inclusion 3

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 4

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Nevada bluegrass, alpine timothy

Interpretive Groups

Capability classification: Hutchley soil—le, Tusel and Suak soils—VIIIs, nonirrigated

Range site: Hutchley soil—028BY034NV; Tusel soil—025XY004NV; Suak soil—028BY032NV; Inclusion 1—025XY024NV; Inclusion 2—025XY056NV; Inclusion 3—none; Inclusion 4—028BY095NV

230—Linoyer-Katelana association**Map Unit Setting**

Position on landscape: Alluvial flats

Composition

Major components:

- Linoyer very fine sandy loam, 0 to 2 percent slopes—70 percent

- Katelana silt loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Sheffit silt loam, 0 to 4 percent slopes—5 percent

- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 0 to 2 percent slopes—3 percent

- Inclusion 3: Katelana silt loam, 0 to 2 percent slopes—1 percent

- Inclusion 4: Hessing silt loam, 0 to 4 percent slopes—1 percent

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Alluvial flats

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches
Texture: Very fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches
Texture: Silt loam
Structure: Prismatic
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 11.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Low

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Alluvial flats
Parent material: Alluvium derived from limestone over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Shadscale, squirreltail

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam

Structure: Prismatic parting to platy
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches
Texture: Silt loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches
Texture: Silty clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 13.0 to 16.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic
Position on landscape: Alluvial flats
Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Alluvial flats

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Alluvial flats

Distinctive present vegetation: Shadecale, black greasewood

Inclusion 4

Classification: Typic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Alluvial flats

Distinctive present vegetation: Shadecale, Indian ricegrass

Interpretive Groups

Capability classification: Linoyer soil—Ie, irrigated;

Linoyer soil—Ie, Katelana soil—IIs, nonirrigated

Range site: Linoyer soil—028BY013NV; Katelana soil—028BY073NV; Inclusion 1—028BY028NV; Inclusion 2—028BY010NV; Inclusion 3—028BY074NV; Inclusion 4—028BY017NV

231—Linoyer very fine sandy loam, 0 to 2 percent slopes**Map Unit Setting**

Position on landscape: Inset fans and fan skirts

Composition

Major component:

- Linoyer very fine sandy loam, 0 to 2 percent slopes—90 percent

Contrasting inclusion:

- Inclusion 1: Tulase silt loam, 0 to 2 percent slopes—10 percent

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans and fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 11.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusion**Inclusion 1**

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans and fan skirts

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Linoyer soil—Ie, irrigated and nonirrigated

Range site: Linoyer soil—028BY013NV; Inclusion 1—028BY045NV

232—Linoyer-Heist-Tulase association**Map Unit Setting**

Position on landscape: Inset fans

Composition

Major components:

- Linoyer very fine sandy loam, 0 to 2 percent slopes—45 percent
- Heist silt loam, 0 to 4 percent slopes—35 percent
- Tulase silt loam, 0 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents silt loam, 2 to 4 percent slopes—4 percent
- Inclusion 2: Xeric Torriorthents silt loam, 0 to 4 percent slopes—1 percent

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 11.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 0 to 4 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Linoyer and Tulase soils—le, irrigated; Linoyer soil—le, Heist and Tulase soils—lc, nonirrigated

Range site: Linoyer soil—028BY013NV; Heist soil—028BY084NV; Tulase soil—028BY045NV; Inclusion 1—028BY010NV; Inclusion 2—028BY003NV

233—Linoyer silt loam, 0 to 2 percent slopes

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major component:

- Linoyer very fine sandy loam, 0 to 2 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Blimo gravelly loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Durixerollic Calciorthids gravelly loam, 0 to 4 percent slopes—5 percent

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 45 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 45 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 11.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—4; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Linoyer soil—Ilc, irrigated, Vlc, nonirrigated

Range site: Linoyer soil—028BY013NV; Inclusion 1—028BY014NV; Inclusion 2—028BY010NV

241—Katelana, level-Raph Association

Map Unit Setting

Position on landscape: Beach plains

Composition

Major components:

- Katelana, silt loam, 0 to 2 percent slopes—50 percent
- Raph loam, 0 to 2 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Typic Torriorthents very gravelly sandy loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Pyrat gravelly sandy loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Zerk gravelly loam, 0 to 2 percent slopes—4 percent
- Inclusion 4: Linoyer very fine sandy loam, 0 to 2 percent slopes—1 percent

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lagoons

Parent material: Alluvium derived from limestone over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Shadscale, squirreltail

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Prismatic parting to platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches

Texture: Silt loam

Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches
Texture: Silty clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 13.0 to 16.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Raph Soil

Classification: Typic Camborthids, fine-loamy, mixed, mesic
Position on landscape: Lagoons
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches
Texture: Loam
Structure: Platy
Consistence: Hard, friable
Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 30 inches
Texture: Loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 30 to 42 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 42 to 60 inches
Texture: Stratified fine sandy loam to very gravelly coarse sand
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: Rare
Permeability: Moderate
Available water capacity: 7.0 to 9.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Torriorthents, fine-loamy over sandy or sandy-skeletal, mixed (calcareous), mesic
Position on landscape: Beach plains
Distinctive present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Beach plains
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Beach plains

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 4

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Lagoons

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Raph—Ilc, irrigated; Katelana—VIIIs, Raph—VIIc, nonirrigated

Range site: Katelana—028BY073NV; Raph 028BY017NV; Inclusion 1—028BY056NV; Inclusion 2—028BY010NV; Inclusion 3—028BY075NV; Inclusion 4—028BY013NV

242—Katelana association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Katelana silt loam, 0 to 2 percent slopes—55 percent
- Katelana silt loam, 2 to 4 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Sheffit silt loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Typic Torriorthents silty clay loam, 0 to 4 percent slopes—4 percent
- Inclusion 3: Aeric Halaquepts silty clay loam, 0 to 2 percent slopes—1 percent

Characteristics of the Nearly Level Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Alluvium derived from limestone over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Shadscale, squirreltail

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Prismatic parting to platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 13.0 to 16.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the More Sloping Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Alluvium derived from limestone over lacustrine sediments

Slope range: 2 to 4 percent

Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Shadscale, black greasewood, squirreltail

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Prismatic parting to platy
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches
Texture: Silt loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches
Texture: Silty clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 13.0 to 16.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains
Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Typic Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Lake plains
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 3

Classification: Aeric Halaquepts, fine-silty, mixed (calcareous), mesic
Position on landscape: Lake plains
Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Interpretive Groups

Capability classification: Katelana soils—VIIs, nonirrigated
Range site: The nearly level Katelana soil—028BY073NV; the more sloping Katelana soil—028BY074NV; Inclusion 1—028BY028NV; Inclusion 2—028BY003NV; Inclusion 3—028BY020NV

243—Katelana-Heist-Nyak association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Katelana silt loam, 0 to 2 percent slopes—45 percent
- Heist silt loam, 0 to 2 percent slopes—30 percent
- Nyak clay loam, 0 to 2 percent slopes—15 percent

Contrasting inclusion:

- Inclusion 1: Typic Torriorthents silty clay loam, 0 to 4 percent slopes—10 percent

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Lake plains
Parent material: Alluvium derived from limestone over lacustrine sediments

Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Shadscale, squirreltail

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Prismatic parting to platy
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches
Texture: Silt loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches
Texture: Silty clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 13.0 to 16.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Outer margins of lake plains
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 40 inches
Texture: Fine sandy loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 40 to 60 inches
Texture: Very fine sand
Structure: Single grained
Consistence: Loose
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid
Available water capacity: 6.0 to 7.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Nyak Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 9 inches
Texture: Clay loam
Structure: Platy
Consistence: Slightly hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 9 to 14 inches
Texture: Fine sandy loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 60 inches
Texture: Stratified fine sandy loam to silty clay loam
Structure: Platy
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: Rare
Permeability: Moderately slow
Available water capacity: 7.0 to 8.5 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusion

Inclusion 1

Classification: Typic Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Lake plains
Distinctive present vegetation: Sickie saltbush, Indian ricegrass, western wheatgrass

Interpretive Groups

Capability classification: Katelana soil—IIs, Heist and Nyak soils—Ic, nonirrigated
Range site: Katelana soil—028BY073NV; Heist soil—028BY084NV; Nyak soil—028BY045NV; Inclusion 1—028BY065NV

244—Katelana-Raph association

Map Unit Setting

Position on landscape: Alluvial flats

Composition

Major components:

- Katelana silt loam, 2 to 4 percent slopes—50 percent
- Raph loam, 0 to 4 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Linoyer very fine sandy loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Sheffit silt loam, 0 to 2 percent slopes—5 percent

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Alluvial flats
Parent material: Alluvium derived from limestone over lacustrine sediments
Slope range: 2 to 4 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Shadscale, black greasewood, squirreltail

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Prismatic parting to platy
Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 13.0 to 16.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Raph Soil

Classification: Typic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Alluvial flats

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Loam

Structure: Platy

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 30 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 30 to 42 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 42 to 60 inches

Texture: Stratified fine sandy loam to very gravelly coarse sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: Rare

Permeability: Moderate

Available water capacity: 7.0 to 9.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to alluvial flats

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains adjacent to alluvial flats

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Raph soil—Ie, irrigated; Katelana soil—IIs, Raph soil—IIC, nonirrigated

Range site: Katelana soil—028BY074NV; Raph soil—028BY017NV; Inclusion 1—028BY013NV; Inclusion 2—028BY028NV

246—Katelana-Blimo association

Map Unit Setting

Position on landscape: Fan skirts and alluvial flats

Composition

Major components:

- Katelana silt loam, 0 to 2 percent slopes—50 percent
- Blimo gravelly loam, 0 to 2 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Heist silt loam, 2 to 4 percent slopes—5 percent
- Inclusion 2: Sheffit silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Tulase silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 4: Sycomat sandy loam, 0 to 4 percent slopes—2 percent

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Alluvial flats

Parent material: Alluvium derived from limestone over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Shadscale, squirreltail

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Prismatic parting to platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 13.0 to 16.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent
Depth: 0 to 8 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches
Texture: Gravelly sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Very hard, firm
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 4.5 to 7.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains adjacent to alluvial flats

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Black greasewood, shadscale, squirreltail

Interpretive Groups

Capability classification: Katelana soil—IIs, Blimo soil—IIs, nonirrigated

Range site: Katelana soil—028BY009NV; Blimo soil—028BY014NV; Inclusion 1—028BY084NV; Inclusion 2—028BY028NV; Inclusion 3—028BY045NV; Inclusion 4—028BY074NV

250—Sheffit-Katelana association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Sheffit silt loam, 0 to 2 percent slopes—45 percent
- Katelana silt loam, 0 to 2 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Boofuss silty clay, 2 to 8 percent slopes—6 percent
- Inclusion 2: Typic Torripsamments fine sand, 2 to 8 percent slopes—3 percent
- Inclusion 3: Katelana silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 4: Typic Torriorthents silty clay loam, 0 to 2 percent slopes—1 percent

Characteristics of the Sheffit Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 3 to 60 inches

Texture: Stratified silt loam to clay

Structure: Massive

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 8.5 to 10.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Very slow

Hydrologic group: D

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Alluvium derived from limestone over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Shadscale, black greasewood, squirreltail

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Prismatic parting to platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 13.0 to 16.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains
Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Inclusion 2

Classification: Typic Torripsamments, mixed, mesic
Position on landscape: Dunes on lake plains
Distinctive present vegetation: Black greasewood, Indian ricegrass

Inclusion 3

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Lake plains
Distinctive present vegetation: Shadscale, squirreltail

Inclusion 4

Classification: Typic Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Outer margins of lake plains
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Sheffit and Katelana soils—VIIIs, nonirrigated

Range site: Sheffit soil—028BY028NV; Katelana soil—028BY074NV; Inclusion 1—028BY020NV; Inclusion 2—028BY021NV; Inclusion 3—028BY073NV; Inclusion 4—028BY003NV

252—Sheffit-Equis association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Sheffit silt loam, 0 to 2 percent slopes—40 percent
- Equis silty clay, 0 to 2 percent slopes—30 percent
- Equis silty clay, wet, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: McConnel gravelly fine sandy loam, 0 to 4 percent slopes—10 percent
- Inclusion 2: Equis silty clay, 0 to 2 percent slopes—5 percent

Characteristics of the Sheffit Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,000 feet

Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 3 to 60 inches

Texture: Stratified silt loam to clay

Structure: Massive

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 8.5 to 10.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Very slow

Hydrologic group: D

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Equis Soil

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Lacustrine sediments and mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,000 feet

Dominant present vegetation: Black greasewood, basin wildrye, alkali sacaton

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches
Texture: Silty clay
Structure: Prismatic
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm
Sodicity: SAR 40 to 70

Depth: 6 to 30 inches
Texture: Silty clay
Structure: Prismatic
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm
Sodicity: SAR 20 to 50

Depth: 30 to 50 inches
Texture: Silty clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm
Sodicity: SAR less than 5

Depth: 50 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm
Sodicity: SAR less than 5

Soil and Water Features

Depth to a seasonal high water table: 36 to 60 inches
Frequency of flooding: Rare
Permeability: Slow
Available water capacity: 8.5 to 12.5 inches
Water-supplying capacity: 9 to 12 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.28; T value—5;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Wet Equis Soil

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Lake plains adjacent to springs and seeps

Parent material: Lacustrine sediments and mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,000 feet

Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches
Texture: Silty clay
Structure: Prismatic
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm
Sodicity: SAR 40 to 70

Depth: 6 to 30 inches
Texture: Silty clay
Structure: Prismatic
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm
Sodicity: SAR 40 to 70

Depth: 30 to 50 inches
Texture: Silty clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm
Sodicity: SAR less than 5

Depth: 50 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm
Sodicity: SAR less than 5

Soil and Water Features

Depth to a seasonal high water table: 12 to 36 inches
Frequency of flooding: Rare
Permeability: Very slow
Available water capacity: 8.5 to 12.5 inches
Water-supplying capacity: 9 to 12 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.28; T value—5;
 wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Camborthids, sandy-skeletal, mixed, mesic
Position on landscape: Fan skirts adjacent to lake plains
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Typic Halaquepts, fine, carbonatic, mesic
Position on landscape: Lake plains adjacent to springs and seeps
Distinctive present vegetation: Bluegrass, sedge, rush

Interpretive Groups

Capability classification: Sheffit and Equis soils—VIIIs, the wet Equis soil—Iw, nonirrigated
Range site: Sheffit soil—028BY028NV; Equis soil—028BY004NV; the wet Equis soil—028BY002NV; Inclusion 1—0028BY010NV; Inclusion 2—028BY001NV

253—Sheffit-Zorravista association

Map Unit Setting

Position on landscape: Basin floors

Composition

Major components:

- Sheffit fine sand, 0 to 2 percent slopes—40 percent
- Sheffit silt loam, 0 to 2 percent slopes—30 percent
- Zorravista fine sand, 2 to 8 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Katelana silt loam, 0 to 2 percent slopes—8 percent
- Inclusion 2: Typic Torriorthents silty clay loam, 0 to 2 percent slopes—3 percent
- Inclusion 3: Raph loam, 0 to 2 percent slopes—2 percent
- Inclusion 4: Boofuss silty clay, 2 to 4 percent slopes—2 percent

Characteristics of Sheffit Fine Sand

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains adjacent to areas of dunes
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Big sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Fine sand
Structure: Single grained
Consistence: Loose
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 3 to 18 inches
Texture: Loam
Structure: Massive
Consistence: Slightly hard, very friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 18 to 60 inches
Texture: Silty clay
Structure: Massive
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 8.5 to 10.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—1
Hazard of erosion: By water—slight; by wind—high
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: High

Characteristics of Sheffit Silt Loam

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 3 to 60 inches

Texture: Stratified silt loam to clay

Structure: Massive

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 8.5 to 10.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Very slow

Hydrologic group: D

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Zorravista Soil

Classification: Xeric Torripsamments, mixed, mesic

Position on landscape: Dunes

Parent material: Mixed eolian material

Slope range: 2 to 8 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Big sagebrush, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 5 inches

Texture: Fine sand

Structure: Single grained

Consistence: Loose

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 5 to 44 inches

Texture: Fine sand

Structure: Single grained

Consistence: Loose

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 44 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Very strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very rapid over very slow

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Very slow

Hydrologic group: A

Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—1

Hazard of erosion: By water—slight; by wind—high

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, shadscale, squirreltail

Inclusion 2

Classification: Typic Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Inclusion 3

Classification: Typic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Lake plains

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 4

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Interpretive Groups

Capability classification: Sheffit fine sand—IVs, irrigated; Sheffit silt loam and the Zorravista soil—VIIIs, nonirrigated

Range site: Sheffit fine sand—028BY005NV; Sheffit silt loam—028BY028NV; Zorravista soil—028BY068NV; Inclusion 1—028BY074NV; Inclusion 2—029XY008NV; Inclusion 3—028BY017NV; Inclusion 4—028BY020NV

254—Sheffit-Boofuss association**Map Unit Setting**

Position on landscape: Lake plains

Composition

Major components:

- Sheffit silt loam, 0 to 2 percent slopes—45 percent
- Boofuss silty clay, 0 to 2 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Aquic Torriorthents silty clay loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Xerertic Torriorthents silty clay loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Typic Salorthids silty clay loam, 0 to 2 percent slopes—5 percent

Characteristics of the Sheffit Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,100 feet

Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 3 to 60 inches

Texture: Stratified silt loam to clay

Structure: Massive

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 8.5 to 10.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Very slow

Hydrologic group: D

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Boofuss Soil

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium and lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,100 feet

Dominant present vegetation: Black greasewood, basin wildrye, alkali sacaton

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 5 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Very strongly alkaline

Salinity: More than 16 mmhos per cm

Sodicity: SAR 50 to 80

Depth: 5 to 20 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Hard, firm

Reaction: Very strongly alkaline
Salinity: More than 16 mmhos per cm
Sodicity: SAR 50 to 80

Depth: 20 to 60 inches
Texture: Fine sandy loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm
Sodicity: SAR 10 to 30

Soil and Water Features

Depth to a seasonal high water table: 48 to 72 inches
Frequency of flooding: Rare
Permeability: Slow
Available water capacity: 9.0 to 10.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.32; T value—5;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Aquic Torriorthents, fine, montmorillonitic, mesic
Position on landscape: Lake plains adjacent to areas of springs and seeps
Distinctive present vegetation: Alkali sacaton, alkali cordgrass

Inclusion 2

Classification: Xerertic Torriorthents, fine, montmorillonitic, mesic
Position on landscape: Lake plains
Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Inclusion 3

Classification: Typic Salorthids, fine, montmorillonitic, mesic
Position on landscape: Lake plains
Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Interpretive Groups

Capability classification: Sheffit soil—VIIIs, Boofuss soil—VIIw, nonirrigated
Range site: Sheffit soil—028BY028NV; Boofuss soil—028BY004NV; Inclusion 1—028BY002NV; Inclusion 2—028BY020NV; Inclusion 3—028BY020NV

255—Sheffit-Kunzler association

Map Unit Setting

Position on landscape: Basin floors and stream terraces

Composition

Major components:

- Sheffit silt loam, 0 to 2 percent slopes—40 percent
- Sheffit silt loam, moist, 0 to 2 percent slopes—25 percent
- Kunzler loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Playas, 0 to 1 percent slopes—10 percent
- Inclusion 2: Tulase silt loam, 2 to 4 percent slopes—3 percent
- Inclusion 3: Typic Torriorthents sandy loam, 0 to 2 percent slopes—2 percent

Characteristics of the Sheffit Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Very strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 3 to 60 inches
Texture: Stratified silt loam to clay
Structure: Massive
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches
Frequency of flooding: None
Permeability: Very slow

Available water capacity: 8.5 to 10.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.55; T value—5;
 wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Moist Sheffit Soil

Classification: Xeric Torriorthents, fine, montmorillonitic
 (calcareous), mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Black greasewood, basin
 wildrye, inland saltgrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Very strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 3 to 60 inches
Texture: Stratified silt loam to clay
Structure: Massive
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 8.5 to 10.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.55; T value—5;
 wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy,
 mixed, mesic
Position on landscape: Stream terraces
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Wyoming big sagebrush,
 squirreltail, bluegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches
Texture: Loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 25 inches
Texture: Loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 25 to 60 inches
Texture: Sandy loam
Structure: Massive
Consistence: Hard, brittle
Reaction: Very strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60
 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 6.5 to 9.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5;
 wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Lowest areas on lake plains

Distinctive present vegetation: None

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to lake plains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Typic Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to lake plains

Distinctive present vegetation: Sickie saltbush, Indian ricegrass, western wheatgrass

Interpretive Groups

Capability classification: Sheffit soils—VII_s, Kunzler soil—VII_c, nonirrigated

Range site: Sheffit soil—028BY028NV; the moist Sheffit soil—028BY069NV; Kunzler soil—028BY056NV; Inclusion 1—none; Inclusion 2—028BY045NV; Inclusion 3—028BY065NV

262—Equis silt loam, 0 to 2 percent slopes

Map Unit Setting

Position on landscape: Flood plains

Composition

Major component:

- Equis silt loam, 0 to 2 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Boofuss silty clay, 0 to 2 percent slopes—5 percent
- Inclusion 2: Equis silty clay, 0 to 2 percent slopes—5 percent
- Inclusion 3: Kolda silt loam, 0 to 2 percent slopes—5 percent

Characteristics of the Equis Soil

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Flood plains

Parent material: Lacustrine sediments and mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,100 feet

Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 6 to 30 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 30 to 50 inches

Texture: Silty clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Sodicity: SAR less than 5

Depth: 50 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Sodicity: SAR less than 5

Soil and Water Features

Depth to a seasonal high water table: 12 to 36 inches

Frequency of flooding: Rare

Permeability: Very slow

Available water capacity: 8.5 to 12.5 inches

Water-supplying capacity: 9 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic

Position on landscape: Alluvial flats adjacent to flood plains

Distinctive present vegetation: Black greasewood, basin wildrye, inland saltgrass

Inclusion 2

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Flood plains

Distinctive present vegetation: Black greasewood, basin wildrye, alkali sacaton

Inclusion 3

Classification: Typic Haplaquolls, fine, montmorillonitic (calcareous), mesic

Position on landscape: Flood plains adjacent to stream channels

Distinctive present vegetation: Bluegrass, sedge, rush

Interpretive Groups

Capability classification: Equis soil—Vlw, nonirrigated

Range site: Equis soil—028BY002NV; Inclusion 1—028BY069NV; Inclusion 2—028BY004NV; Inclusion 3—028BY001NV

266—Equis-Kolda association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Equis silty clay, 0 to 2 percent slopes—40 percent
- Equis silty clay, wet, 0 to 2 percent slopes—25 percent
- Kolda silt loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Equis silty clay, 0 to 2 percent slopes—5 percent
- Inclusion 2: Typic Halaquepts silty clay loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Cumulic Haplaquolls silt loam, 0 to 2 percent slopes—5 percent

Characteristics of the Equis Soil

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Lake plains adjacent to springs and seeps

Parent material: Lacustrine sediments and mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,100 feet

Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 6 to 30 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 30 to 50 inches

Texture: Silty clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Sodicity: SAR less than 5

Depth: 50 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Sodicity: SAR less than 5

Soil and Water Features

Depth to a seasonal high water table: 12 to 36 inches

Frequency of flooding: Rare

Permeability: Very slow

Available water capacity: 8.5 to 12.5 inches

Water-supplying capacity: 9 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Wet Equis Soil

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Lake plains adjacent to springs and seeps

Parent material: Lacustrine sediments and mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,100 feet

Dominant present vegetation: Inland saltgrass, sedge, wildrye

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 6 to 30 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 30 to 50 inches

Texture: Silty clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Sodicity: SAR less than 5

Depth: 50 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Sodicity: SAR less than 5

Soil and Water Features

Depth to a seasonal high water table: 12 to 36 inches

Frequency of flooding: Rare

Permeability: Very slow

Available water capacity: 8.5 to 12.5 inches

Water-supplying capacity: 9 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Kolda Soil

Classification: Typic Haplaquolls, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains adjacent to springs and seeps

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,100 feet

Dominant present vegetation: Bluegrass, sedge, rush

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 6 to 22 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches

Texture: Clay

Structure: Prismatic

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 0 to 18 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 12 to 16 inches

Runoff: Very slow

Hydrologic group: D

Erosion factors (surface layer): K value—.55; T value—5;
wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Drained areas of lake plains
adjacent to springs and seeps

Distinctive present vegetation: Black greasewood, basin
wildrye, alkali sacaton

Inclusion 2

Classification: Typic Halaquepts, fine, montmorillonitic,
mesic

Position on landscape: Lake plains adjacent to areas of
springs and seeps

Distinctive present vegetation: Mat muhly

Inclusion 3

Classification: Cumulic Haplaquolls, fine, montmorillonitic,
mesic

Position on landscape: Ponded areas of lake plains
adjacent to springs and seeps

Distinctive present vegetation: Bulrush, cattail

Interpretive Groups

Capability classification: Kolda soil—VIw, irrigated; Equis
soils—VIw, Kolda soil—VIIw, nonirrigated

Range site: Equis soil—028BY002NV; the wet Equis
soil—028BY012NV; Kolda soil—028BY001NV;
Inclusion 1—028BY004NV; Inclusion 2—
028BY031NV; Inclusion 3—028BY044NV

267—Equis-Devilsgait association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Equis silty clay, 0 to 2 percent slopes—45 percent
- Devilsgait silt loam, 0 to 2 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Kolda silt loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Equis silty clay, 0 to 2 percent slopes—5 percent

Characteristics of the Equis Soil

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Lake plains adjacent to springs
and seeps

Parent material: Lacustrine sediments and mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Inland saltgrass, sedge,
wildrye

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 6 to 30 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 30 to 50 inches

Texture: Silty clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Sodicity: SAR less than 5

Depth: 50 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Sodicity: SAR less than 5

Soil and Water Features

Depth to a seasonal high water table: 12 to 36 inches

Frequency of flooding: Rare

Permeability: Very slow

Available water capacity: 8.5 to 12.5 inches

Water-supplying capacity: 9 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—5;
wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Devilsgait Soil

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Ponded areas on lake plains adjacent to springs and seeps

Parent material: Mixed silty alluvium and some loess and ash

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Bulrush, cattail

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 10 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 60 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 0 to 18 inches

Flooding: Frequent, for long periods, from March through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 10 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Typic Haplaquolls, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains adjacent to springs and seeps

Distinctive present vegetation: Bluegrass, sedge, rush

Inclusion 2

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Lake plains adjacent to areas of springs and seeps

Distinctive present vegetation: Alkali sacaton, alkali cordgrass

Interpretive Groups

Capability classification: Devilsgait soil—Vw, irrigated; Equis and Devilsgait soils—Vlw, nonirrigated

Range site: Equis soil—028BY012NV; Devilsgait soil—028BY044NV; Inclusion 1—028BY001NV; Inclusion 2—028BY002NV

270—Atlow-Maderbak-Rubble land association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Atlow very gravelly loam, 15 to 50 percent slopes—40 percent
- Maderbak very gravelly clay loam, 30 to 75 percent slopes—30 percent
- Rubble land, 30 to 75 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Roden very gravelly clay loam, 8 to 30 percent slopes—7 percent
- Inclusion 2: Rock outcrop—4 percent
- Inclusion 3: Atlow very gravelly loam, 4 to 15 percent slopes—2 percent
- Inclusion 4: Haarvar gravelly clay loam, 4 to 15 percent slopes—2 percent

Characteristics of the Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Parent material: Residuum derived from andesite

Slope range: 15 to 50 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 16 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Maderbak Soil

Classification: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite

Slope range: 30 to 75 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 15 percent; pebbles, 25 percent

Depth: 0 to 3 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 17 inches

Texture: Very gravelly clay

Structure: Angular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 17 to 29 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 29 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.0 to 3.0 inches

Water-supplying capacity: 6 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Rubble Land

Position on landscape: Side slopes of mountains

Parent material: Andesite

Distinctive present vegetation: None

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Inclusion 4

Classification: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Interpretive Groups

Capability classification: Atlow and Maderbak soils—VIIIs, nonirrigated; Rubble land—VIIIIs

Range site: Atlow soil—028BY089NV; Maderbak soil—029XY006NV; Inclusion 1—028BY060NV; Inclusion 2—none; Inclusion 3—028BY089NV; Inclusion 4—029XY014NV

271—Atlow association

Map Unit Setting

Position on landscape: Mountains and hills

Composition

Major components:

- Atlow very gravelly loam, 15 to 50 percent slopes—65 percent
- Atlow very gravelly loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—8 percent
- Inclusion 2: Maderbak extremely stony clay loam, 8 to 30 percent slopes—5 percent

- Inclusion 3: Haarvar gravelly clay loam, 15 to 50 percent slopes—2 percent

Characteristics of the Steep Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains and hills

Parent material: Residuum derived from andesite

Slope range: 15 to 50 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 16 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Less Sloping Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Crests and side slopes of mountains and hills

Parent material: Residuum derived from andesite

Slope range: 4 to 15 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 16 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains and hills

Distinctive present vegetation: None

Inclusion 2

Classification: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of mountains and hills

Distinctive present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Lower side slopes of mountains and hills

Distinctive present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Interpretive Groups

Capability classification: Atlow soils—Vlls, nonirrigated

Range site: Atlow soils—028BY089NV; Inclusion 1—none; Inclusion 2—029XY006NV; Inclusion 3—029XY014NV

275—Atlow-Upatad association

Map Unit Setting

Position on landscape: Hills and mountains

Composition

Major components:

- Atlow very gravelly loam, 15 to 50 percent slopes—40 percent
 - Atlow very gravelly loam, 4 to 15 percent slopes—25 percent
 - Upatad very gravelly silt loam, 15 to 50 percent slopes—20 percent
- Contrasting inclusions:*
- Inclusion 1: Lithic Haplargids very gravelly loam, 15 to 50 percent slopes—5 percent
 - Inclusion 2: Xerollic Haplargids very gravelly loam, 8 to 30 percent slopes—4 percent
 - Inclusion 3: Rock outcrop—3 percent
 - Inclusion 4: Maderbak very gravelly clay loam, 4 to 15 percent slopes—3 percent

Characteristics of the Steep Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains and hills

Parent material: Residuum derived from andesite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 16 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Less Sloping Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains and hills

Parent material: Residuum derived from andesite

Slope range: 4 to 15 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 16 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Upatad Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains and hills

Parent material: Residuum and colluvium derived from andesite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 40 percent

Depth: 0 to 3 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very gravelly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.4 to 2.1 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Haplargids, coarse-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of mountains and hills

Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass

Inclusion 2

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains and hills

Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 3

Position on landscape: Crests and side slopes of mountains and hills

Distinctive present vegetation: None

Inclusion 4

Classification: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of mountains and hills

Distinctive present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Interpretive Groups

Capability classification: Atlow and Upatad soils—VIIIs, nonirrigated

Range site: Atlow soils—028BY089NV; Upatad soil—028BY093NV; Inclusion 1—028BY086NV; Inclusion 2—028BY007NV; Inclusion 3—none; Inclusion 4—029XY006NV

276—Stewval-Maderbak-Atlow association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Stewval very gravelly fine sandy loam, 8 to 30 percent slopes—45 percent
- Maderbak very gravelly clay loam, 8 to 30 percent slopes—25 percent
- Atlow very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Lithic Xerollic Haplargids very gravelly loam, 4 to 15 percent slopes—6 percent
- Inclusion 2: Aridic Calcic Argixerolls gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Rock outcrop—3 percent
- Inclusion 4: Rubble land, fragmental, 8 to 50 percent slopes—1 percent

Characteristics of the Stewval Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite

Slope range: 8 to 30 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 51 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 30 percent; pebbles, 35 percent

Depth: 0 to 2 inches

Texture: Very gravelly fine sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 10 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 4 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 4 to 6 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Maderbak Soil

Classification: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite

Slope range: 8 to 30 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 15 percent; pebbles, 25 percent

Depth: 0 to 3 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 17 inches

Texture: Very gravelly clay

Structure: Angular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 17 to 29 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 29 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.0 to 3.0 inches

Water-supplying capacity: 6 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Crests and side slopes of mountains

Parent material: Residuum derived from andesite

Slope range: 15 to 50 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 16 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass, Indian ricegrass

Inclusion 3

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 4

Position on landscape: Side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Stewval, Maderbak, and Atlow soils—Vlls, nonirrigated

Range site: Stewval soil—029XY014NV; Maderbak soil—028AY022NV; Atlow soil—028BY089NV; Inclusion 1—028BY016NV; Inclusion 2—028BY086NV; Inclusion 3—none; Inclusion 4—none

279—Atlow-Broland-Yody association

Map Unit Setting

Position on landscape: Hills and fan piedmont remnants

Composition

Major components:

- Atlow very gravelly loam, 8 to 30 percent slopes—40 percent
- Broland very gravelly loam, 2 to 8 percent slopes—25 percent
- Yody gravelly sandy loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Roden very gravelly clay loam, 8 to 30 percent slopes—10 percent
- Inclusion 2: Tulase silt loam, 2 to 8 percent slopes—5 percent

Characteristics of the Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of hills
Parent material: Residuum derived from andesite
Slope range: 8 to 30 percent
Elevation: 6,000 to 7,000 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent

Depth: 0 to 2 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 16 inches
Texture: Very gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Broland Soil

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium derived from volcanic rock

Slope range: 2 to 8 percent
Elevation: 6,000 to 7,000 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 3 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches
Texture: Gravelly clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 9 to 16 inches
Texture: Extremely gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 to 19 inches
Texture: Extremely gravelly sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 19 to 40 inches
Texture: Strongly cemented duripan
Consistence: Extremely hard, extremely firm

Depth: 40 to 60 inches
Texture: Extremely gravelly coarse sand
Structure: Massive
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None

Permeability: Moderately slow
Available water capacity: 2.5 to 3.5 inches
Water-supplying capacity: 6 to 9 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1;
 wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Alluvium derived from andesite
Slope range: 4 to 15 percent
Elevation: 6,000 to 7,000 feet
Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Gravelly sandy loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 16 inches
Texture: Gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 16 to 38 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 38 to 60 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 5.0 to 6.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow
Position on landscape: Side slopes of hills
Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Narrow drainageways on hills
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Yody soil—IVe, irrigated; Atlow and Browland soils—VIIs, Yody soil—VI, nonirrigated
Range site: Atlow soil—028BY089NV; Browland soil—028BY089NV; Yody soil—028BY086NV; Inclusion 1—028BY083NV; Inclusion 2—028BY045NV

282—Palinor very gravelly loam, 2 to 15 percent slopes

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major component:

- Palinor very gravelly loam, 2 to 15 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 4 to 15 percent slopes—5 percent

- Inclusion 3: Heist silt loam, 0 to 4 percent slopes—3 percent
- Inclusion 4: Zerk gravelly loam, 0 to 4 percent slopes—2 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 15 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, loamy, mixed (calcareous), mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Palinor soil—VIIIs, nonirrigated

Range site: Palinor soil—028BY011NV; Inclusion 1—028BY010NV; Inclusion 2—028BY016NV; Inclusion 3—028BY084NV; Inclusion 4—028BY075NV

283—Palinor-Urmahot association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinor gravelly loam, 2 to 8 percent slopes—65 percent
- Urmahot very gravelly loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Aridic Calcixerolls gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Xerollic Calciorthids gravelly sandy loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Linoyer very fine sandy loam, 0 to 4 percent slopes—4 percent
- Inclusion 4: Urmahot gravelly loam, 8 to 30 percent slopes—1 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Lower fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Urmahot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Upper fan piedmont remnants

Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 2

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Palinoor and Urmafot soils—VIIIs, nonirrigated

Range site: Palinoor soil—028BY011NV; Urmafot soil—028BY006NV; Inclusion 1—028BY094NV; Inclusion 2—028BY010NV; Inclusion 3—028BY013NV; Inclusion 4—028BY060NV

286—Palinoor-Shabliss association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinoor gravelly loam, 2 to 8 percent slopes—60 percent
- Shabliss gravelly loam, 2 to 8 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Wintermute gravelly silt loam, 2 to 8 percent slopes—6 percent
- Inclusion 2: Haploxerollic Durorthids very gravelly loam, 0 to 4 percent slopes—4 percent
- Inclusion 3: Tulase silt loam, 0 to 4 percent slopes—3 percent
- Inclusion 4: Xerollic Durorthids gravelly loam, 4 to 15 percent slopes—2 percent

Characteristics of the Palinoor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches
Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash
Slope range: 2 to 8 percent
Elevation: 6,000 to 7,000 feet
Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent
Depth: 0 to 3 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm
Depth: 3 to 13 inches
Texture: Gravelly loam
Structure: Subangular blocky

Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.0 inches
Water-supplying capacity: 5.5 to 6 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.37; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Lower fan piedmont remnants
Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Haploxerollic Durorthids, coarse-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Classification: Xerollic Durorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass

Interpretive Groups

Capability classification: Palino and Shabliss soils—VIIIs, nonirrigated

Range site: Palinor soil—028BY011NV; Shabliss soil—028BY080NV; Inclusion 1—028BY075NV; Inclusion 2—028BY084NV; Inclusion 3—028BY045NV; Inclusion 4—028BY083NV

287—Palinor-Wintermute association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinor gravelly loam, 2 to 8 percent slopes—55 percent
- Wintermute gravelly silt loam, 2 to 8 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Typic Torriorthents sandy loam, 2 to 4 percent slopes—5 percent
- Inclusion 2: Zerk gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Xeric Torriorthents gravelly sandy loam, 2 to 4 percent slopes—3 percent
- Inclusion 4: Heist silt loam, 2 to 4 percent slopes—2 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 5,900 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Wintermute Soil

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Lower fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 5,900 to 6,500 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 2 inches

Texture: Gravelly silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches
Texture: Gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 11 to 60 inches
Texture: Very gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 2.5 to 5.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Typic Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Palinoir and Wintermute soils—VIIs, nonirrigated
Range site: Palinoir soil—028BY011NV; Wintermute soil—028BY075NV; Inclusion 1—028BY075NV; Inclusion 2—028BY075NV; Inclusion 3—028BY010NV; Inclusion 4—028BY084NV

288—Palinoir-Yody-Broland association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinoir gravelly loam, 2 to 8 percent slopes—40 percent
- Yody gravelly sandy loam, 2 to 8 percent slopes—25 percent
- Broland very gravelly loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Haploxerollic Durorthids very gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 2: Durixerollic Haplargids gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Durixerollic Camborthids gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 4: Heist silt loam, 0 to 4 percent slopes—2 percent

Characteristics of the Palinoir Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants
Parent material: Alluvium derived from limestone and dolomite
Slope range: 2 to 8 percent
Elevation: 5,900 to 6,900 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent
Depth: 0 to 10 inches
Texture: Gravelly loam
Structure: Platy

Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches
Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Alluvium derived from andesite
Slope range: 2 to 8 percent
Elevation: 6,000 to 6,900 feet
Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Gravelly sandy loam

Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches
Texture: Gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 5.0 to 6.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Broland Soil

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium derived from volcanic rock
Slope range: 4 to 15 percent
Elevation: 6,000 to 6,900 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 to 40 inches

Texture: Strongly cemented duripan

Consistence: Extremely hard, extremely firm

Depth: 40 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Durixerollic Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Durixerollic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 4

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Yody soil—IIIe, irrigated; Palinoir and Broland soils—VIIs, Yody soil—VIs, nonirrigated

Range site: Palinoir soil—028BY011NV; Yody soil—028BY086NV; Broland soil—028BY089NV; Inclusion 1—028BY084NV; Inclusion 2—028BY010NV; Inclusion 3—028BY007NV; Inclusion 4—028BY084NV

290—Palinoir-Shabliss-Tulase association**Map Unit Setting**

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinoir gravelly loam, 2 to 8 percent slopes—45 percent
- Shabliss gravelly loam, 2 to 8 percent slopes—25 percent
- Tulase silt loam, 2 to 4 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Durixerollic Calciorthids gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 2: Automal gravelly silt loam, 0 to 4 percent slopes—3 percent
- Inclusion 3: Urmafot gravelly loam, 8 to 30 percent slopes—3 percent

- Inclusion 4: Heist silt loam, 0 to 4 percent slopes—1 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 5,900 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash

Slope range: 2 to 8 percent

Elevation: 5,800 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 5.5 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—1;
wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Parent material: Silty alluvium derived from mixed rocks and some volcanic ash
Slope range: 2 to 4 percent
Elevation: 5,800 to 6,500 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5;
wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Lower fan piedmont remnants
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Side slopes of fan piedmont remnants
Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Tulase soil—Ile, irrigated; Palinor and Shabliss soils—VIIc, Tulase soil—VIc, nonirrigated
Range site: Palinor soil—028BY011NV; Shabliss soil—028BY080NV; Tulase soil—028BY045NV; Inclusion 1—028BY010NV; Inclusion 2—028BY011NV; Inclusion 3—028BY060NV; Inclusion 4—028BY084NV

291—Urmafot-Borvant-Biken association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Urmafot very gravelly loam, 2 to 8 percent slopes—50 percent
- Borvant gravelly loam, 4 to 15 percent slopes—20 percent
- Biken very gravelly fine sandy loam, 8 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Aridic Calcixerolls gravelly loam, 8 to 30 percent slopes—10 percent
- Inclusion 2: Aridic Haploxerolls gravelly loam, 2 to 8 percent slopes—5 percent

Characteristics of the Urmatot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Borvant Soil

Classification: Aridic Petrocalcic Palexerolls, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone

Slope range: 4 to 15 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 3 percent; pebbles, 40 percent

Depth: 0 to 2 inches

Texture: Gravelly loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 19 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 to 43 inches

Texture: Indurated petrocalcic material

Structure: Massive

Consistence: Extremely hard, extremely firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 7 to 9 inches

Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1;
 wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Characteristics of the Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Side slopes of fan piedmont remnants with a rock core
Parent material: Mixed alluvium over weathered tuff
Slope range: 8 to 30 percent
Elevation: 6,000 to 7,000 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent
Depth: 0 to 9 inches
Texture: Very gravelly fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 9 to 18 inches
Texture: Very gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches
Texture: Partially decomposed, tuffaceous sandstone

Depth: 30 inches
Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.5 inches
Water-supplying capacity: 6 to 9 inches

Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1;
 wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Upper side slopes of fan piedmont remnants
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Aridic Haploxerolls, loamy-skeletal, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Interpretive Groups

Capability classification: Urmafot, Borvant, and Biken soils—VIIIs, nonirrigated
Range site: Urmafot soil—028BY006NV; Borvant soil—028BY062NV; Biken soil—028BY016NV; Inclusion 1—028BY079NV; Inclusion 2—028BY007NV

292—Palinor-Urmafot-Urmafot, very shallow association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinor gravelly loam, 8 to 15 percent slopes—45 percent
- Urmafot very gravelly loam, 2 to 8 percent slopes—25 percent
- Urmafot gravelly loam, very shallow, 4 to 15 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Izar very gravelly sandy loam, 8 to 30 percent slopes—5 percent
- Inclusion 2: Aridic Calcixerolls gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Tulase silt loam, 2 to 4 percent slopes—3 percent

- Inclusion 4: Pern silt loam, 2 to 4 percent slopes—2 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 8 to 15 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Urmafot Soil

Classification: Orthodic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1;
 wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Very Shallow Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Upper fan piedmont remnants adjacent to mountains
Parent material: Mixed alluvium
Slope range: 4 to 15 percent
Elevation: 7,000 to 7,500 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 9 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 9 to 32 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.20; T value—1;
 wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Side slopes of fan piedmont remnants with a rock core
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Palinor and Urmafot soils—VII, nonirrigated
Range site: Palinor soil—028BY011NV; Urmafot soil—028BY006NV; the very shallow Urmafot soil—028BY060NV; Inclusion 1—028BY016NV; Inclusion 2—028BY094NV; Inclusion 3—028BY045NV; Inclusion 4—028BY003NV

295—Palinor-Roden association

Map Unit Setting

Position on landscape: Hills and fan piedmonts

Composition

Major components:

- Palinor gravelly loam, 2 to 8 percent slopes—40 percent
- Roden very gravelly clay loam, 8 to 30 percent slopes—30 percent
- Roden very gravelly clay loam, eroded, 8 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents very gravelly loam, 8 to 30 percent slopes—5 percent
- Inclusion 2: Xerollic Haplargids very gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 3: Xerollic Camborthids very gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 4: Haarvar gravelly clay loam, 8 to 30 percent slopes—1 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,200 to 7,200 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Side slopes of hills

Parent material: Residuum and colluvium derived from shale and sandstone

Slope range: 8 to 30 percent

Elevation: 6,200 to 7,200 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 2 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 11 inches

Texture: Fractured shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: None to 2.0 inches
Water-supplying capacity: 5 to 7 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Eroded Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow
Position on landscape: Side slopes of hills
Parent material: Residuum and colluvium derived from shale and sandstone
Slope range: 8 to 30 percent
Elevation: 6,200 to 7,200 feet
Dominant present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent
Depth: 0 to 1 inch
Texture: Very gravelly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 1 to 8 inches
Texture: Very gravelly clay
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 8 inches
Texture: Fractured shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: None to 2.0 inches
Water-supplying capacity: 5 to 7 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, coarse-skeletal, montmorillonitic (calcareous), mesic
Position on landscape: Side slopes of hills
Distinctive present vegetation: Utah juniper, black sagebrush

Inclusion 2

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic
Position on landscape: Hill summits
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Xerollic Camborthids, fine-loamy, mixed, mesic
Position on landscape: Inset fans and drainageways on hills
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow
Position on landscape: Side slopes of hills
Distinctive present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Interpretive Groups

Capability classification: Palino and Roden soils—VII, nonirrigated
Range site: Palino soil—028BY011NV; Roden soil—028BY016NV; the eroded Roden soil—028BY083NV; Inclusion 1—028BY083NV; Inclusion 2—028BY010NV; Inclusion 3—028BY010NV; Inclusion 4—029XY014NV

296—Palinor-Urmafot-Palinor, steep association

Map Unit Setting

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Palinor gravelly loam, 4 to 15 percent slopes—50 percent
- Urmafot very gravelly loam, 4 to 15 percent slopes—20 percent
- Palinor very gravelly loam, steep 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Durixerollic Calciorthids gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 2: Palinor gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Shabliss gravelly loam, 2 to 8 percent slopes—5 percent

Characteristics of the Less Sloping Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 4 to 15 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Steep Palnor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 10 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Palino and Urmafot soils—VIIIs, nonirrigated

Range site: The less sloping Palino soil—028BY011NV; Urmafot soil—028BY006NV; the steep Palino soil—028BY016NV; Inclusion 1—028BY010NV; Inclusion 2—028BY008NV; Inclusion 3—028BY080NV

297—Urmafot-Amelar-Izar association

Map Unit Setting

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Urmafot very gravelly loam, 4 to 15 percent slopes—40 percent
- Amelar very gravelly loam, 4 to 15 percent slopes—30 percent
- Izar very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Bobs very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Biken very gravelly fine sandy loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Borvant gravelly loam, 15 to 50 percent slopes—3 percent
- Inclusion 4: Segura very cobbly loam, 4 to 15 percent slopes—2 percent

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave side slopes of fan piedmont remnants

Parent material: Alluvium derived from limestone and sandstone

Slope range: 4 to 15 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 7 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 to 15 inches

Texture: Very cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 5.0 to 8.0 inches

Water-supplying capacity: 12 to 14 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Izar Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Convex side slopes of fan piedmont remnants with a rock core

Parent material: Residuum and colluvium derived from tuffaceous sandstone

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Fractured sandstone

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 2

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Convex side slopes of fan piedmont remnants with a rock core

Distinctive present vegetation: Utah juniper, black sagebrush

Inclusion 3

Classification: Aridic Petrocalcic Palexerolls, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Lower side slopes of mountains adjacent to fan piedmont remnants

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Interpretive Groups

Capability classification: Urmafot, Amelar, and Izar soils—VIIs, nonirrigated

Range site: Urmafot soil—028BY006NV; Amelar soil—028BY088NV; Izar soil—028BY016NV; Inclusion 1—028BY094NV; Inclusion 2—028BY083NV; Inclusion 3—028BY062NV; Inclusion 4—028BY087NV

300—Playas-Orupa association

Map Unit Setting

Position on landscape: Basin floors

Composition

Major components:

- Playas silty clay, 0 to 1 percent slopes—70 percent
- Orupa silty clay, 4 to 15 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Boofuss silty clay, 0 to 4 percent slopes—10 percent
- Inclusion 2: Boofuss silty clay, 0 to 2 percent slopes—3 percent
- Inclusion 3: Katelana silt loam, 0 to 2 percent slopes—1 percent
- Inclusion 4: Sheffit silt loam, 0 to 2 percent slopes—1 percent

Characteristics of the Playas

Position on landscape: Basin floors

Parent material: Lacustrine sediments

Slope range: 0 to 1 percent

Elevation: 5,900 to 5,950 feet

Dominant present vegetation: None

Typical Profile

Depth: 0 to 6 inches

Texture: Silty clay

Reaction: Very strong alkaline

Salinity: More than 16 mmhos per cm

Sodicity: SAR more than 60

Depth: 6 to 60 inches

Texture: Silty clay

Reaction: Very strongly alkaline

Salinity: More than 16 mmhos per cm

Sodicity: SAR more than 60

Soil and Water Features

Seasonal high water table: 12 inches above to 12 inches below the surface

Frequency of flooding: Occasional

Permeability: Very slow

Available water capacity: 1.2 to 2.4 inches

Runoff: Pondered

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—moderate

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Characteristics of the Orupa Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Parna dunes

Parent material: Windblown clay

Slope range: 4 to 15 percent

Elevation: 5,900 to 5,950 feet

Dominant present vegetation: Winterfat, thickspike wheatgrass, western wheatgrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silty clay

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 60 inches

Texture: Clay loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 8.0 to 10.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.49; T value—5;
wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Halaquepts, clayey over loamy,
montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, alkali
sacaton, inland saltgrass

Inclusion 2

Classification: Typic Halaquepts, clayey over loamy,
montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, basin
wildrye, inland saltgrass

Inclusion 3

Classification: Typic Torriorthents, fine-silty, carbonatic,
mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood,
shadscale, Indian ricegrass

Inclusion 4

Classification: Xeric Torriorthents, fine, montmorillonitic
(calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, big
sagebrush, basin wildrye

Interpretive Groups

Capability classification: Orupa soil—IVe, irrigated;
Playas—VIIIw, Orupa soil—VIc, nonirrigated

Range site: Playas—none; Orupa soil—028BY071NV;
Inclusion 1—028BY020NV; Inclusion 2—
028BY069NV; Inclusion 3—028BY074NV; Inclusion
4—028BY028NV

310—Dune land-Playas association

Map Unit Setting

Position on landscape: Basin floors

Composition

Major components:

- Dune land fine sand, 4 to 15 percent slopes—55 percent
- Playas silty clay, 0 to 1 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Typic Torriorthents silty clay loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Orupa silty clay, 8 to 30 percent slopes—5 percent
- Inclusion 3: Xeric Torriorthents silty clay loam, 0 to 2 percent slopes—5 percent

Characteristics of the Dune land

Position on landscape: Basin floors

Parent material: Sandy eolian material

Slope range: 4 to 15 percent

Elevation: 5,900 to 5,950 feet

Dominant present vegetation: None

Typical Profile

Depth: 0 to 6 inches

Texture: Fine sand

Depth: 6 to 60 inches

Texture: Fine sand

Soil and Water Features

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Rapid

Available water capacity: 1.8 to 3.0 inches

Runoff: Very slow

Hydrologic group: A

Erosion factors (surface layer): K value—.15; T value—5;
wind erodibility group—1

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Characteristics of the Playas

Position on landscape: Basin floors

Parent material: Lacustrine sediments

Slope range: 0 to 1 percent

Elevation: 5,900 to 5,950 feet

Dominant present vegetation: None

Typical Profile

Depth: 0 to 6 inches

Texture: Silty clay

Reaction: Very strong alkaline

Salinity: More than 16 mmhos per cm

Sodicity: SAR more than 60

Depth: 6 to 60 inches

Texture: Silty clay

Reaction: Very strong alkaline

Salinity: More than 16 mmhos per cm

Sodicity: SAR more than 60

Soil and Water Features

Seasonal high water table: 12 inches above to 12 inches below the surface

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 1.2 to 2.4 inches

Runoff: Ponded

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—moderate

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Wyoming big sagebrush, bottlebrush squirreltail

Inclusion 2

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Parna dunes

Distinctive present vegetation: Winterfat, thickspike wheatgrass, western wheatgrass

Inclusion 3

Classification: Xeric Torriorthents, fine-loamy, mixed (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Winterfat, thickspike wheatgrass, western wheatgrass

Interpretive Groups

Capability classification: Dune land—VIIIe, Playas—VIIIw

Range site: Dune land—none; Playas—none; Inclusion 1—028BY056NV; Inclusion 2—028BY071NV; Inclusion 3—028BY071NV

321—Palinor association

Map Unit Setting

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Palinor gravelly loam, 4 to 15 percent slopes—50 percent
- Palinor gravelly loam, 15 to 30 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Shabliss gravelly loam, 4 to 15 percent slopes—10 percent
- Inclusion 2: Palinor very gravelly loam, 8 to 30 percent slopes—5 percent

Characteristics of the Less Sloping Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 4 to 15 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Moderately Steep Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Side slopes of fan piedmont remnants
Parent material: Alluvium derived from limestone and dolomite
Slope range: 15 to 30 percent
Elevation: 6,000 to 7,000 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent
Depth: 0 to 10 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 10 to 18 inches
Texture: Extremely gravelly loam

Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches
Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass

Interpretive Groups

Capability classification: The less sloping Palinor soil—VIIIs, the moderately steep Palinor soil—VIIe, nonirrigated
Range site: The less sloping Palinor soil—028BY011NV; the moderately steep Palinor soil—028BY011NV; Inclusion 1—028BY080NV; Inclusion 2—028BY083NV

322—Palinor-Roden-Urmafot association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinor gravelly loam, 2 to 8 percent slopes—40 percent
- Roden very gravelly clay loam, 8 to 30 percent slopes—25 percent
- Urmafot very gravelly loam, 8 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—8 percent
- Inclusion 2: Lithic Xeric Torriorthents very gravelly loam, 15 to 50 percent slopes—7 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Lower fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants with a rock core

Parent material: Residuum and colluvium derived from shale and sandstone

Slope range: 8 to 30 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 1 inch

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 8 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 inches
Texture: Shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: None to 2.0 inches
Water-supplying capacity: 5 to 7 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Upper fan piedmont remnants
Parent material: Mixed alluvium
Slope range: 8 to 30 percent
Elevation: 7,000 to 7,200 feet
Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 8 to 14 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches
Texture: Indurated duripan
Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Side slopes of fan piedmont remnants on the upper part of the map unit
Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Palino, Roden, and Urmafot soils—VIIIs, nonirrigated
Range site: Palino soil—028BY011NV; Roden soil—028BY083NV; Urmafot soil—028BY006NV; Inclusion 1—028BY010NV; Inclusion 2—028BY060NV

323—Urmafot-Bobs-Palino association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Urmafot very gravelly loam, 2 to 8 percent slopes—40 percent
- Bobs very gravelly loam, 8 to 30 percent slopes—25 percent
- Palinor gravelly loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 15 to 50 percent slopes—7 percent
- Inclusion 2: Aridic Haploxerolls gravelly loam, 0 to 4 percent slopes—5 percent
- Inclusion 3: Urmafot very gravelly loam, 8 to 15 percent slopes—2 percent
- Inclusion 4: Tulse silt loam, 0 to 4 percent slopes—1 percent

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 7,200 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Bobs Soil

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow

Position on landscape: Upper fan piedmont remnants

Parent material: Alluvium derived from limestone and some loess high in content of ash

Slope range: 8 to 30 percent

Elevation: 7,200 to 7,500 feet

Dominant present vegetation: Big sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Indurated petrocalcic material

Soil and Water Features

Depth to a hardpan: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.0 inches
Water-supplying capacity: 7 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Lower fan piedmont remnants
Parent material: Alluvium derived from limestone and dolomite
Slope range: 2 to 8 percent
Elevation: 6,800 to 7,200 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches
Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive

Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic, shallow
Position on landscape: Upper side slopes of fan piedmont remnants
Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Aridic Haploxerolls, fine-loamy, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 3

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Upper fan piedmont remnants adjacent to mountains
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Urmafot, Bobs, and Palinor soils—VIIIs, nonirrigated

Range site: Urmafot soil—028BY006NV; Bobs soil—028BY094NV; Palinor soil—028BY011NV; Inclusion 1—028BY060NV; Inclusion 2—028BY007NV; Inclusion 3—028BY008NV; Inclusion 4—028BY045NV

326—Palinor-Urmafot-Roden association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinor gravelly loam, 2 to 8 percent slopes—35 percent
- Urmafot gravelly loam, 2 to 8 percent slopes—30 percent
- Roden very gravelly clay loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Shabliss gravelly loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Heist silt loam, 0 to 4 percent slopes—4 percent
- Inclusion 3: Pyrat gravelly sandy loam, 0 to 4 percent slopes—4 percent
- Inclusion 4: Urmafot very gravelly loam, 4 to 15 percent slopes—2 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Lower fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Urmafot Soil

Classification: Orthodic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants adjacent to mountains

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 7,000 to 7,200 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 9 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal,

montmorillonitic (calcareous), mesic, shallow

Position on landscape: Lower side slopes of fan piedmont remnants with a rock core

Parent material: Residuum and colluvium derived from shale and sandstone

Slope range: 4 to 15 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 1 inch

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 8 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 inches

Texture: Shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Lower fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Palinoz, Urmafot, and Roden soils—VIIIs, nonirrigated

Range site: Palinoz soil—028BY011NV; Urmafot soil—028BY060NV; Roden soil—028BY083NV; Inclusion 1—028BY080NV; Inclusion 2—028BY084NV; Inclusion 3—028BY010NV; Inclusion 4—028BY006NV

327—Urmafot-Cassiro-Biken association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Urmafot very gravelly loam, 4 to 15 percent slopes—35 percent
- Cassiro stony loam, 4 to 15 percent slopes—30 percent
- Biken very gravelly fine sandy loam, 8 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Bobs very gravelly loam, 4 to 15 percent slopes—10 percent
- Inclusion 2: Biken very gravelly fine sandy loam, 8 to 30 percent slopes—3 percent
- Inclusion 3: Pern silt loam, 2 to 4 percent slopes—1 percent
- Inclusion 4: Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—1 percent

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,500 to 7,200 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cassiro Soil

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,500 to 7,200 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 10 percent

Depth: 0 to 5 inches
Texture: Stony loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 5 to 60 inches
Texture: Very gravelly clay
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 3.5 to 4.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Low

Characteristics of the Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Side slopes of fan piedmont remnants with a rock core
Parent material: Mixed alluvium over weathered tuff
Slope range: 8 to 30 percent
Elevation: 6,500 to 7,200 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent
Depth: 0 to 5 inches
Texture: Very gravelly fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 18 inches
Texture: Very gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches
Texture: Weathered, tuffaceous sandstone

Depth: 30 inches
Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.5 inches
Water-supplying capacity: 6 to 9 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 2

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Lower side slopes of fan piedmont remnants with a rock core
Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass

Inclusion 3

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 4

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: Side slopes of hills

Distinctive present vegetation: Black sagebrush,
bluebunch wheatgrass

Interpretive Groups

Capability classification: Urmafot, Cassiro, and Biken
soils—VIIIs, nonirrigated

Range site: Urmafot soil—028BY006NV; Cassiro soil—
028BY007NV; Biken soil—028BY060NV; Inclusion
1—028BY094NV; Inclusion 2—028BY083NV;
Inclusion 3—028BY003NV; Inclusion 4—
028BY008NV

328—Urmafot-Tecomar-Pookaloo association

Map Unit Setting

Position on landscape: Hills and fan piedmonts

Composition

Major components:

- Urmafot very gravelly loam, 4 to 15 percent slopes—40 percent
- Tecomar extremely gravelly silt loam, 8 to 30 percent slopes—25 percent
- Pookaloo very gravelly loam, 8 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Haplargids very gravelly loam, 2 to 8 percent slopes—10 percent
- Inclusion 2: Aridic Durixerolls gravelly loam, 4 to 15 percent slopes—2 percent
- Inclusion 3: Aridic Haploxerolls gravelly loam, 8 to 30 percent slopes—2 percent
- Inclusion 4: Pern silt loam, 0 to 4 percent slopes—1 percent

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic,
shallow

Position on landscape: Upper fan piedmont remnants
adjacent to hills

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 7,500 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch
wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1;
wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tecomar Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal,
carbonatic, mesic

Position on landscape: South-facing side slopes of hills

Parent material: Residuum and colluvium derived from
limestone and dolomite

Slope range: 8 to 30 percent

Elevation: 6,500 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch
wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 45 degrees F
Frost-free period: About 100 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 60 percent

Depth: 0 to 3 inches
Texture: Extremely gravelly silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 18 inches
Texture: Extremely cobbly silt loam
Structure: Massive
Consistence: Slightly hard, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 7 to 11 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: North-facing side slopes of hills
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 8 to 30 percent
Elevation: 6,500 to 7,500 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches
Texture: Very gravelly silt loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 19 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 2.5 inches
Water-supplying capacity: 10 to 13 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 2

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Aridic Haploxerolls, fine-loamy, mixed, mesic

Position on landscape: Concave areas of side slopes on fan piedmont remnants

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Narrow drainageways on hills and inset fans

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Urmafot, Tecomar, and Pookaloo soils—VIIIs, nonirrigated

Range site: Urmafot soil—028BY006NV; Tecomar soil—028BY008NV; Pookaloo soil—028BY060NV; Inclusion 1—028BY007NV; Inclusion 2—028BY011NV; Inclusion 3—028BY079NV; Inclusion 4—028BY003NV

334—Parisa-Palinor-Shabliss association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Parisa gravelly loam, 2 to 8 percent slopes—35 percent
- Palinor gravelly loam, 2 to 8 percent slopes—30 percent
- Shabliss gravelly loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Tulase silt loam, 2 to 4 percent slopes—5 percent
- Inclusion 2: Pyrat gravelly sandy loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Durixerollic Calciorthids gravelly loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Xerollic Calciorthids gravelly sandy loam, 2 to 4 percent slopes—3 percent

Characteristics of the Parisa Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 4 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 26 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 47 inches

Texture: Indurated duripan

Depth: 47 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 3.0 inches

Water-supplying capacity: 5.5 to 8.5 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Convex areas on fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 5.5 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Lower areas on fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Outer margins of inset fans

Distinctive present vegetation: Wyoming big sagebrush, spiny hopsage, Indian ricegrass

Inclusion 4

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Pigmy sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Parisa, Palinor, and Shabliss soils—VIIIs, nonirrigated

Range site: Parisa soil—028BY010NV; Palinor soil—028BY011NV; Shabliss soil—028BY080NV; Inclusion 1—028BY045NV; Inclusion 2—028BY010NV; Inclusion 3—028BY052NV; Inclusion 4—028BY040NV

336—Parisa gravelly loam, 2 to 8 percent slopes

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major component:

- Parisa gravelly loam, 2 to 8 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Palinor gravelly loam, 4 to 8 percent slopes—5 percent

- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Unsel gravelly fine sandy loam, 2 to 8 percent slopes—4 percent
- Inclusion 4: Typic Torriorthents sandy loam, 0 to 2 percent slopes—1 percent

Characteristics of the Parisa Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 4 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 26 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 47 inches

Texture: Indurated duripan

Depth: 47 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 3.0 inches
Water-supplying capacity: 5.5 to 8.5 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2;
 wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durorthids, loamy-skeletal,
 carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Black sagebrush, Indian
 ricegrass, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, loamy-skeletal, mixed
 (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush,
 needleandthread

Inclusion 3

Classification: Duric Haplargids, fine-loamy, mixed, mesic
Position on landscape: Inset fans and fan skirts adjacent
 to fan piedmont remnants
Distinctive present vegetation: Shadscale, galleta, Bailey
 greasewood, bud sagebrush

Inclusion 4

Classification: Typic Torriorthents, coarse-loamy, mixed
 (calcareous), mesic
Position on landscape: Fan skirts adjacent to fan
 piedmont remnants
Distinctive present vegetation: Shadscale, Indian
 ricegrass

Interpretive Groups

Capability classification: Parisa soil—VIIs, nonirrigated
Range site: Parisa soil—028BY010NV; Inclusion 1—
 028BY011NV; Inclusion 2—028BY010NV; Inclusion
 3—029XY017NV; Inclusion 4—028BY075NV

337—Parisa-Wintermute association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Parisa gravelly loam, 2 to 8 percent slopes—60 percent

- Wintermute gravelly silt loam, 2 to 8 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Unsel gravelly fine sandy loam, 2 to 8 percent slopes—10 percent
- Inclusion 2: Typic Torriorthents sandy loam, 2 to 4 percent slopes—3 percent
- Inclusion 3: Pyrat gravelly sandy loam, 2 to 8 percent slopes—2 percent

Characteristics of the Parisa Soil

Classification: Xerollic Durorthids, loamy-skeletal,
 carbonatic, mesic

Position on landscape: Upper fan piedmont
 remnants

Parent material: Alluvium derived from limestone and
 dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush,
 needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 4 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 26 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 47 inches

Texture: Indurated duripan

Depth: 47 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 3.0 inches
Water-supplying capacity: 5.5 to 8.5 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Wintermute Soil

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Lower fan piedmont remnants
Parent material: Mixed alluvium
Slope range: 2 to 8 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 2 inches
Texture: Gravelly silt loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches
Texture: Gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 11 to 60 inches
Texture: Very gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None
Permeability: Slow
Available water capacity: 2.5 to 5.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Duric Haplargids, fine-loamy, mixed, mesic
Position on landscape: Inset fans and fan skirts adjacent to fan piedmont remnants
Distinctive present vegetation: Shadscale, galleta, Bailey greasewood, bud sagebrush

Inclusion 2

Classification: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Fan skirts adjacent to fan piedmont remnants
Distinctive present vegetation: Black greasewood, shadscale, bottlebush squirreltail

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Parisa and Wintermute soils—Vlls, nonirrigated
Range site: Parisa soil—028BY010NV; Wintermute soil—028BY075NV; Inclusion 1—029XY017NV; Inclusion 2—028BY074NV; Inclusion 3—028BY010NV

338—Parisa-Palinor-Tulase association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Parisa gravelly loam, 2 to 4 percent slopes—50 percent
- Palinor gravelly loam, 2 to 8 percent slopes—20 percent
- Tulase silt loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Yody gravelly sandy loam, 2 to 8 percent slopes—10 percent
- Inclusion 2: Kunzler silt loam, 0 to 2 percent slopes—5 percent

Characteristics of the Parisa Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 4 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 26 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 47 inches

Texture: Indurated duripan

Depth: 47 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 3.0 inches

Water-supplying capacity: 5.5 to 8.5 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Convex areas on fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tulse Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass

Inclusion 2

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Interpretive Groups

Capability classification: Tulse soil—IIC, irrigated; Parisa and Palinor soils—VIIIs, Tulse soil—VIc, nonirrigated

Range site: Parisa soil—028BY010NV; Palinor soil—028BY011NV; Tulse soil—028BY045NV; Inclusion 1—028BY086NV; Inclusion 2—028BY056NV

340—Izar association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Izar very gravelly loam, 15 to 50 percent slopes—60 percent
- Izar very gravelly loam, 4 to 15 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Lithic Torriorthents very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Durixerollic Calciorthids gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Tulse silt loam, 2 to 8 percent slopes—4 percent
- Inclusion 4: Rock outcrop—2 percent

Characteristics of the Steep Izar Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Side slopes of hills

Parent material: Residuum and colluvium derived from tuffaceous sandstone

Slope range: 15 to 50 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Fractured sandstone

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Less Sloping Izar Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Side slopes of hills

Parent material: Residuum and colluvium derived from tuffaceous sandstone

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Fractured sandstone

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Torriorthents, sandy-skeletal, mixed (calcareous), mesic

Position on landscape: Crests and convex side slopes of hills

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Drainageways on hills

Distinctive present vegetation: Spiny hopsage, black sagebrush, Indian ricegrass

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Drainageways on hills

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Position on landscape: Crests and side slopes of hills

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Izar soils—VIIs, nonirrigated

Range site: The steep Izar soil—028BY016NV; the less sloping Izar soil—028BY016NV; Inclusion 1—028BY075NV; Inclusion 2—028BY053NV; Inclusion 3—028BY045NV; Inclusion 4—none

346—Izar-Roden-Zerk association**Map Unit Setting**

Position on landscape: Rock pediment remnants, low hills, and beach plains

Composition

Major components:

- Izar very gravelly loam, 2 to 8 percent slopes—50 percent
- Roden very gravelly clay loam, 2 to 8 percent slopes—20 percent
- Zerk gravelly loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Zerk gravelly loam, 8 to 30 percent slopes—6 percent
- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 2 to 4 percent slopes—5 percent
- Inclusion 3: Rock outcrop—3 percent
- Inclusion 4: Durorthidic Xeric Torriorthents silt loam, 2 to 8 percent slopes—1 percent

Characteristics of the Izar Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Rock pediment remnants

Parent material: Residuum and colluvium derived from tuffaceous sandstone

Slope range: 2 to 8 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Fractured sandstone

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Low hills

Parent material: Residuum and colluvium derived from shale and sandstone

Slope range: 2 to 8 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 2 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 11 inches

Texture: Shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Zerk Soil

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Beach plains adjacent to areas of rock pediment remnants and low hills

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid over rapid

Available water capacity: 3.0 to 4.0 inches

Water-supplying capacity: 5 to 7.5 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Beach plains adjacent to areas of rock pediment remnants and low hills

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic, shallow

Position on landscape: Low hills

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Position on landscape: Low hills and areas of rock pediment remnants

Distinctive present vegetation: None

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Drainageways on low hills

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Zerk soil—Ive, irrigated; Izar, Roden, and Zerk soils—VIIs, nonirrigated

Range site: Izar soil—028BY011NV; Roden soil—028BY016NV; Zerk soil—028BY075NV; Inclusion 1—028BY017NV; Inclusion 2—028BY016NV; Inclusion 3—none; Inclusion 4—028BY010NV

351—Heist-Tulase association

Map Unit Setting

Position on landscape: Inset fans and fan skirts

Composition

Major components:

- Heist silt loam, 0 to 2 percent slopes—60 percent
- Tulase silt loam, 0 to 2 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Durixerollic Calciorthids gravelly loam, 0 to 4 percent slopes—8 percent
- Inclusion 2: Shabliss gravelly loam, 0 to 4 percent slopes—2 percent

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans and fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts and inset fans

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Inset fans and fan skirts

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants adjacent to fan skirts and inset fans

Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Tulase soil—Ilc, irrigated; Heist and Tulase soils—Vlc, nonirrigated

Range site: Heist soil—028BY084NV; Tulase soil—

028BY045NV; Inclusion 1—028BY010NV; Inclusion 2—028BY080NV

353—Heist silt loam, 0 to 4 percent slopes

Map Unit Setting

Position on landscape: Fan piedmonts and fan skirts

Composition

Major component:

- Heist silt loam, 0 to 4 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Typic Camborthids silt loam, 0 to 2 percent slopes—6 percent
- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 0 to 4 percent slopes—4 percent
- Inclusion 3: Tulase silt loam, 2 to 4 percent slopes—3 percent
- Inclusion 4: Uwell silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans and fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Camborthids, fine-silty, mixed, mesic

Position on landscape: Fan skirts and inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Fan skirts and inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts and inset fans

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Outer margins of lake plains adjacent to fan skirts

Distinctive present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Heist soil—Vlc, nonirrigated

Range site: Heist soil—028BY084NV; Inclusion 1—

028BY013NV; Inclusion 2—028BY010NV; Inclusion 3—028BY045NV; Inclusion 4—028BY054NV

356—Heist-Wintermute association

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major components:

- Heist silt loam, 0 to 2 percent slopes—50 percent
- Wintermute gravelly silt loam, 0 to 2 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Typic Calciorthids gravelly sandy loam, 0 to 4 percent slopes—7 percent
- Inclusion 2: Zerk gravelly loam, 0 to 4 percent slopes—5 percent
- Inclusion 3: Typic Torriorthents sandy loam, 0 to 2 percent slopes—2 percent
- Inclusion 4: Broyles silt loam, 0 to 2 percent slopes—1 percent

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,300 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid
Available water capacity: 6.0 to 7.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Wintermute Soil

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Fan skirts adjacent to fluves
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 5,900 to 6,300 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 70 percent
Depth: 0 to 2 inches
Texture: Gravelly silt loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 2 to 11 inches
Texture: Gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm
Depth: 11 to 60 inches
Texture: Very gravelly sandy loam
Structure: Massive

Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 2.5 to 5.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Typic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Fan skirts adjacent to fluves
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic
Position on landscape: Fan skirts adjacent to fan piedmont remnants
Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 3

Classification: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Fan skirts adjacent to fluves
Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Inclusion 4

Classification: Duric Camborthids, coarse-loamy, mixed, mesic
Position on landscape: Lower areas of fan skirts adjacent to stream terraces
Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Heist soil—VIc, Wintermute soil—VII, nonirrigated
Range site: Heist soil—028BY084NV; Wintermute soil—028BY075NV; Inclusion 1—028BY084NV; Inclusion 2—028BY075NV; Inclusion 3—028BY074NV; Inclusion 4—028BY075NV

360—Belmill association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Belmill gravelly loam, 2 to 8 percent slopes—45 percent
- Belmill gravelly sandy loam, 4 to 15 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Bobs very gravelly loam, 4 to 15 percent slopes—6 percent
- Inclusion 2: Urmafot very gravelly loam, 4 to 15 percent slopes—4 percent
- Inclusion 3: Aridic Haploxerolls gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 4: Urmafot gravelly loam, 4 to 15 percent slopes—1 percent

Characteristics of the Gently Sloping Belmill Soil

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,200 to 7,200 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 11 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 13 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Very hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 19 to 30 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 30 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.5 to 4.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Steeper Belmill Soil

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,200 to 7,200 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 11 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly sandy loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 13 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 13 to 19 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Very hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 19 to 30 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 30 to 60 inches
Texture: Extremely gravelly loamy sand
Structure: Single grained
Consistence: Loose
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.5 to 4.0 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 2

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Upper fan piedmont remnants

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Aridic Haploxerolls, fine-loamy, mixed, mesic
Position on landscape: Inset fans

Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 4

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants adjacent to mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Belmill soils—IIle, irrigated, VIs, nonirrigated

Range site: The gently sloping Belmill soil—028BY086NV; the steeper Belmill soil—028BY087NV; Inclusion 1—028BY094NV; Inclusion 2—028BY006NV; Inclusion 3—028BY007NV; Inclusion 4—028BY060NV

361—Belmill-Cowgil-Selti association

Map Unit Setting

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Belmill gravelly loam, 2 to 8 percent slopes—40 percent
- Cowgil very gravelly sandy loam, 2 to 8 percent slopes—30 percent
- Selti very stony coarse sandy loam, 4 to 15 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Haplargids very gravelly loam, 4 to 8 percent slopes—10 percent
- Inclusion 2: Xerollic Durargids very gravelly sandy loam, 2 to 8 percent slopes—5 percent

Characteristics of the Belmill Soil

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,500 to 7,200 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 11 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 13 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Very hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 19 to 30 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 30 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.5 to 4.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cowgil Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,500 to 7,200 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 4 inches

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 21 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 61 inches

Texture: Very gravelly loamy sand

Structure: Single grained

Consistence: Loose

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Selti Soil

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from monzonite

Slope range: 4 to 15 percent

Elevation: 6,500 to 7,200 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 11 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 5 percent; pebbles, 25 percent

Depth: 0 to 4 inches

Texture: Very stony coarse sandy loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Very cobbly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 30 to 60 inches

Texture: Extremely stony loamy coarse sand

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 3.0 to 4.5 inches

Water-supplying capacity: 8.5 to 11.5 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Haplargids, fine, montmorillonitic, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Inclusion 2

Classification: Xerollic Durargids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass

Interpretive Groups

Capability classification: Belmil soil—IIIc, irrigated; Belmil soil—VIs, Cowgil and Selti soils—VIIIs, nonirrigated

Range site: Belmill soil—028BY086NV; Cowgil soil—028BY010NV; Selti soil—028BY007NV; Inclusion 1—028BY089NV; Inclusion 2—028BY086NV

372—Automal gravelly silt loam, 2 to 4 percent slopes

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major component:

- Automal gravelly silt loam, 2 to 4 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Durargids silt loam, 2 to 4 percent slopes—8 percent
- Inclusion 2: Palinor gravelly loam, 2 to 4 percent slopes—5 percent
- Inclusion 3: Heist silt loam, 2 to 4 percent slopes—2 percent

Characteristics of the Automal Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 12 inches

Texture: Gravelly silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 32 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 3.0 to 5.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durargids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Automal soil—VIIs, nonirrigated

Range site: Automal soil—028BY011NV; Inclusion 1—028BY089NV; Inclusion 2—028BY011NV; Inclusion 3—028BY084NV

373—Automal-Wintermute association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Automal gravelly silt loam, 2 to 8 percent slopes—65 percent
- Wintermute gravelly silt loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Urmafot very gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 3: Broyles very fine sandy loam, 0 to 4 percent slopes—3 percent
- Inclusion 4: Xerollic Camborthids very gravelly loam, 2 to 8 percent slopes—2 percent

Characteristics of the Automal Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 12 inches

Texture: Gravelly silt loam

Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 to 32 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 32 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 3.0 to 5.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Wintermute Soil

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium
Slope range: 2 to 8 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 70 percent
Depth: 0 to 2 inches
Texture: Gravelly silt loam
Structure: Platy
Consistence: Soft, very friable

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches
Texture: Gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 11 to 60 inches
Texture: Very gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 2.5 to 5.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Orthodic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Duric Camborthids, coarse-loamy, mixed, mesic
Position on landscape: Broad areas of inset fans on the lower part of the unit
Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 4

Classification: Xerollic Camborthids, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, spiny hopsage, Indian ricegrass

Interpretive Groups

Capability classification: Automal and Wintermute soils—VIIIs, nonirrigated

Range site: Automal soil—028BY011NV; Wintermute soil—028BY075NV; Inclusion 1—028BY084NV; Inclusion 2—028BY006NV; Inclusion 3—028BY017NV; Inclusion 4—028BY052NV

380—Palinor-Parisa association

Map Unit Setting

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Palinor gravelly loam, 4 to 15 percent slopes—70 percent
- Parisa gravelly loam, 4 to 15 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Urmafot very gravelly loam, 15 to 30 percent slopes—5 percent
- Inclusion 2: Aridic Calcixerolls gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 3: Urmafot very gravelly loam, 4 to 15 percent slopes—5 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Parisa Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 4 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 26 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 26 to 47 inches
Texture: Indurated duripan

Depth: 47 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 3.0 inches
Water-supplying capacity: 5.5 to 8.5 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Side slopes of fan piedmont remnants
Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 3

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Palino and Parisa soils—VIIIs, nonirrigated

Range site: Palino soil—028BY011NV; Parisa soil—028BY010NV; Inclusion 1—028BY060NV; Inclusion 2—028BY094NV; Inclusion 3—028BY006NV

411—Cassiro association

Map Unit Setting

Position on landscape: Fan piedmonts and axial-stream flood plains

Composition

Major components:

- Cassiro stony loam, moist, 4 to 15 percent slopes—65 percent
- Cassiro stony loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Aridic Argixerolls gravelly loam, 15 to 50 percent slopes—10 percent
- Inclusion 2: Devilsgait silt loam, 0 to 2 percent slopes—2 percent
- Inclusion 3: Pern silt loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Aridic Palexerolls gravelly silt loam, 4 to 15 percent slopes—1 percent

Characteristics of the Moist Cassiro Soil

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,200 to 7,200 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 10 percent

Depth: 0 to 5 inches
Texture: Stony loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 5 to 60 inches
Texture: Very gravelly clay
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 3.5 to 4.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Low

Characteristics of the Cassiro Soil

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium
Slope range: 4 to 15 percent
Elevation: 6,200 to 7,200 feet
Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 10 percent

Depth: 0 to 5 inches
Texture: Stony loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 5 to 60 inches
Texture: Very gravelly clay
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 3.5 to 4.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Aridic Argixerolls, coarse-skeletal, montmorillonitic, mesic
Position on landscape: Side slopes of fan piedmont remnants
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic
Position on landscape: Axial-stream flood plains
Distinctive present vegetation: Tufted hairgrass, sedge

Inclusion 3

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic
Position on landscape: Axial-stream flood plains in areas of stream channel entrenchment
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 4

Classification: Aridic Palexerolls, coarse-skeletal, montmorillonitic, mesic
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Interpretive Groups

Capability classification: Cassiro soils—VIIIs, nonirrigated
Range site: Cassiro, moist—028BY030NV; Cassiro—

028BY007NV; Inclusion 1—028BY079NV; Inclusion 2—028BY022NV; Inclusion 3—028BY003NV; Inclusion 4—028BY037NV

413—Cassiro-Fax-Belmill association

Map Unit Setting

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Cassiro stony loam, 2 to 8 percent slopes—40 percent
- Fax very cobbly coarse sandy loam, 2 to 8 percent slopes—30 percent
- Belmill gravelly sandy loam, 2 to 8 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Aridic Palexerolls gravelly silt loam, 2 to 8 percent slopes—6 percent
- Inclusion 2: Cassiro stony loam, 4 to 8 percent slopes—5 percent
- Inclusion 3: Aridic Durixerolls gravelly loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Typic Palexerolls gravelly silt loam, 4 to 8 percent slopes—2 percent

Characteristics of the Cassiro Soil

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,200 to 7,500 feet

Dominant present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 10 percent

Depth: 0 to 5 inches

Texture: Stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 60 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 3.5 to 4.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Characteristics of the Fax Soil

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,200 to 7,500 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 15 percent

Depth: 0 to 3 inches

Texture: Very cobbly coarse sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 22 inches

Texture: Very gravelly sandy clay loam

Structure: Massive

Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 22 to 48 inches
Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 20 to 36 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 11 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Belmill Soil

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium
Slope range: 2 to 8 percent
Elevation: 6,200 to 7,500 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 11 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Gravelly sandy loam
Structure: Granular
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 13 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 13 to 19 inches
Texture: Extremely gravelly sandy loam

Structure: Massive
Consistence: Very hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 19 to 30 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 30 to 60 inches
Texture: Extremely gravelly loamy sand
Structure: Single grained
Consistence: Loose
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.5 to 4.0 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Palexerolls, fine, montmorillonitic, mesic
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 2

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Aridic Durixerolls, fine-loamy, mixed, mesic
Position on landscape: Lower fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass

Inclusion 4

Classification: Typic Paleixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Upper fan piedmont remnants

Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Interpretive Groups

Capability classification: Belmill—IIIe, irrigated; Cassiro and Fax soils—VIIIs, Belmill—VIs, nonirrigated

Range site: Cassiro—028BY046NV; Fax—028BY086NV; Belmill—028BY087NV; Inclusion 1—028BY037NV; Inclusion 2—028BY030NV; Inclusion 3—028BY086NV; Inclusion 4—028BY039NV

414—Cassiro-Belmill association**Map Unit Setting**

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Cassiro stony loam, 2 to 8 percent slopes—45 percent
- Belmill gravelly loam, 4 to 15 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Belmill gravelly sandy loam, 4 to 15 percent slopes—8 percent
- Inclusion 2: Cassiro stony loam, 4 to 15 percent slopes—7 percent

Characteristics of the Cassiro Soil

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Lower fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,200 to 6,800 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 10 percent

Depth: 0 to 5 inches

Texture: Stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 60 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 3.5 to 4.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Characteristics of the Belmill Soil

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,200 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 11 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 13 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Very hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 19 to 30 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 30 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.5 to 4.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Upper fan piedmont remnants adjacent to mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 2

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Upper fan piedmont remnants adjacent to mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Belmill—IIIe, irrigated; Cassiro—VIIIs, Belmill—VIs, nonirrigated

Range site: Cassiro—028BY007NV; Belmill—028BY086NV; Inclusion 1—028BY087NV; Inclusion 2—028BY030NV

421—Wintermute gravelly sandy loam, 0 to 4 percent slopes

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major component:

- Wintermute gravelly sandy loam, 0 to 4 percent slopes—90 percent

Contrasting inclusions:

- Inclusion 1: Tulase silt loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Heist silt loam, 0 to 4 percent slopes—3 percent
- Inclusion 3: Zerk gravelly loam, 0 to 4 percent slopes—2 percent

Characteristics of the Wintermute Soil

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,300 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 2 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches

Texture: Gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 11 to 60 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 2.5 to 5.0 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to fluves

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to fluves

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 3

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Fan skirts adjacent to fluves

Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Wintermute—VIIs, nonirrigated

Range site: Wintermute—028BY075NV; Inclusion 1—028BY045NV; Inclusion 2—028BY084NV; Inclusion 3—028BY017NV

425—Wintermute association

Map Unit Setting

Position on landscape: Fan skirts and beach plains

Composition

Major components:

- Wintermute loamy sand, 2 to 4 percent slopes—70 percent
- Wintermute gravelly silt loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Sheffit silt loam, 0 to 4 percent slopes—8 percent
- Inclusion 2: Automal gravelly silt loam, 2 to 4 percent slopes—5 percent
- Inclusion 3: Kunzler silt loam, 0 to 4 percent slopes—2 percent

Characteristics of the Wintermute Soil

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,300 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 2 inches

Texture: Loamy sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches

Texture: Gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 11 to 60 inches

Texture: Very gravelly sandy loam

Structure: Massive
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 2.5 to 5.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—2
Hazard of erosion: By water—slight; by wind—moderate
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Characteristics of the Gravelly Wintermute Soil

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Beach plains
Parent material: Mixed alluvium
Slope range: 2 to 4 percent
Elevation: 6,000 to 6,300 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 70 percent
Depth: 0 to 2 inches
Texture: Gravelly silt loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 2 to 11 inches
Texture: Gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm
Depth: 11 to 60 inches
Texture: Very gravelly sandy loam
Structure: Massive
Consistence: Hard, firm

Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 2.5 to 5.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic
Position on landscape: Lagoons
Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Lower fan piedmont remnants adjacent to fan skirts and beach plains
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Lagoons on beach plains
Distinctive present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Interpretive Groups

Capability classification: Wintermute soils—VIIIs, nonirrigated
Range site: Wintermute—028BY017NV; Wintermute, gravelly—028BY075NV; Inclusion 1—028BY028NV; Inclusion 2—028BY011NV; Inclusion 3—028BY056NV

434—Pookaloo-Hyzen association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pookaloo very gravelly loam, 30 to 75 percent slopes—35 percent
- Hyzen extremely stony loam, 30 to 75 percent slopes—30 percent
- Hyzen extremely stony loam, dry, 30 to 75 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—6 percent
- Inclusion 2: Cavehill very gravelly silt loam, 30 to 75 percent slopes—5 percent
- Inclusion 3: Haunchee very cobbly loam, 30 to 75 percent slopes—2 percent
- Inclusion 4: Hardzem channery loam, 30 to 75 percent slopes—2 percent

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 45 percent

Depth: 0 to 2 inches

Texture: Extremely stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 12 inches

Texture: Extremely stony loam

Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 6 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Dry Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: Crests and side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 30 to 75 percent
Elevation: 7,000 to 7,800 feet
Dominant present vegetation: Littleleaf mountainmahogany, black sagebrush, Scribner needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 45 percent
Depth: 0 to 1 inch
Texture: Extremely stony loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 6 inches
Texture: Extremely stony loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 6 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 6 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Concave, north-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Upper, north-facing side slopes of mountains

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Typic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: Upper, north-facing side slopes of mountains

Distinctive present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Interpretive Groups

Capability classification: Pookaloo and Hyzen soils—VIIIs, nonirrigated

Range site: Pookaloo—028BY060NV; Hyzen—028BY060NV; Hyzen, dry—028BY066NV; Inclusion 1—none; Inclusion 2—028BY062NV; Inclusion 3—028BY032NV; Inclusion 4—028BY063NV

436—Pookaloo-Hyzen-Cavehill association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pookaloo very gravelly loam, 15 to 50 percent slopes—45 percent
- Hyzen extremely stony loam, 15 to 50 percent slopes—20 percent
- Cavehill very gravelly silt loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Cavehill cobbly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Rock outcrop—5 percent
- Inclusion 3: Onkeyo very gravelly silt loam, 15 to 50 percent slopes—3 percent
- Inclusion 4: Bobs very gravelly loam, 4 to 15 percent slopes—2 percent

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower, south-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,200 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Upper, south-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,200 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 45 percent

Depth: 0 to 2 inches

Texture: Extremely stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 12 inches

Texture: Extremely stony loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 6 to 9 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Upper, north-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow

Position on landscape: Valley fans of mountains

Distinctive present vegetation: Big sagebrush, Indian ricegrass

Interpretive Groups

Capability classification: Pookaloo, Hyzen, and Cavehill soils—VIIIs, nonirrigated

Range site: Pookaloo—028BY060NV; Hyzen—028BY060NV; Cavehill—028BY062NV; Inclusion 1—028BY058NV; Inclusion 2—none; Inclusion 3—028BY079NV; Inclusion 4—028BY094NV

437—Pookaloo-Urmafot-Tulase association

Map Unit Setting

Position on landscape: Hills and fan piedmonts

Composition

Major components:

- Pookaloo very gravelly loam, 15 to 50 percent slopes—50 percent
- Urmafot very gravelly loam, 8 to 30 percent slopes—20 percent

- Tulase silt loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Urmafot gravelly loam, 15 to 30 percent slopes—5 percent
- Inclusion 2: Grink very stony loam, 15 to 30 percent slopes—3 percent
- Inclusion 3: Xine gravelly loam, 15 to 30 percent slopes—5 percent
- Inclusion 4: Hyzen extremely stony loam, 15 to 50 percent slopes—2 percent

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 8 to 30 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1;
 wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Tulse Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty,
 mixed (calcareous), mesic
Position on landscape: Inset fans
Parent material: Silty alluvium derived from mixed rocks
 and some volcanic ash
Slope range: 2 to 4 percent
Elevation: 6,500 to 7,000 feet
Dominant present vegetation: Wyoming big sagebrush,

winterfat, basin wildrye, Indian ricegrass, thickspike
 wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5;
 wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Orthidic Durixerolls, loamy, mixed, mesic,
 shallow
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Singleleaf pinyon, Utah
 juniper, mountain big sagebrush, bluebunch
 wheatgrass

Inclusion 2

Classification: Lithic Haploxerolls, loamy-skeletal, mixed,
 frigid
Position on landscape: Side slopes of hills and the upper
 side slopes of fan piedmont remnants
Distinctive present vegetation: Curlleaf
 mountainmahogany, mountain big sagebrush,
 bluebunch wheatgrass

Inclusion 3

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave side slopes of hills

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Upper side slopes of hills

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Tulasé—Ile, irrigated; Pookaloo and Urmafot—VIIIs, Tulasé—VIc, nonirrigated

Range site: Pookaloo—028BY060NV; Urmafot—028BY006NV; Tulasé—028BY045NV; Inclusion 1—028BY060NV; Inclusion 2—028BY043NV; Inclusion 3—028BY088NV; Inclusion 4—028BY060NV

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 4 to 14 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 14 to 31 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Depth: 31 to 60 inches

Texture: Stratified extremely gravelly coarse sand and extremely gravelly sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.5 to 7.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—3; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

440—Hessing-Zerk association**Map Unit Setting**

Position on landscape: Beach plains

Composition

Major components:

- Hessing silt loam, 0 to 4 percent slopes—55 percent
- Zerk gravelly loam, 2 to 8 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 0 to 4 percent slopes—6 percent
- Inclusion 2: Zerk gravelly loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Katelana silt loam, 0 to 2 percent slopes—2 percent
- Inclusion 4: Heist silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Hessing Soil

Classification: Typic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Beach plains

Parent material: Loess and silty alluvium over mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Characteristics of the Zerk Soil

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Offshore bars on beach plains

Parent material: Mixed alluvium

Slope range: 2 to 8 percent
Elevation: 5,800 to 6,000 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 115 days

Typical Profile

Depth: 0 to 3 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 to 60 inches
Texture: Extremely gravelly coarse sand
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid over rapid
Available water capacity: 3.0 to 4.0 inches
Water-supplying capacity: 5 to 7.5 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Concave areas on offshore bars
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Offshore bars

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 3

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lagoons

Distinctive present vegetation: Shadscale, squirreltail

Inclusion 4

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fluves on beach plains

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Hessing—IIs, Zerk—Ive, irrigated; Hessing and Zerk—VIIs, nonirrigated

Range site: Hessing—028BY017NV; Zerk—028BY075NV; Inclusion 1—028BY010NV; Inclusion 2—028BY084NV; Inclusion 3—028BY073NV; Inclusion 4—028BY084NV

450—Shabliss-Yody association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Shabliss gravelly loam, 2 to 8 percent slopes—50 percent
- Yody gravelly sandy loam, 2 to 8 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Palinor gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Blimo gravelly loam, 0 to 4 percent slopes—4 percent
- Inclusion 3: Xeric Torriorthents gravelly sandy loam, 4 to 15 percent slopes—4 percent
- Inclusion 4: Durorthidic Xeric Torriorthents silt loam, 0 to 4 percent slopes—2 percent

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,900 feet

Dominant present vegetation: Wyoming big sagebrush,
Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 5.5 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—1;
wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed,
mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,900 feet

Dominant present vegetation: Wyoming big sagebrush,
Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 16 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 16 to 38 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 38 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2;
wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durorthids, loamy-skeletal,
carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Broad inset fans
Distinctive present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic, shallow
Position on landscape: Eroded areas on side slopes of fan piedmont remnants
Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, spiny hopsage, Indian ricegrass

Interpretive Groups

Capability classification: Yody—IIIe, irrigated; Shabliss—VIIs and Yody—VIs, nonirrigated
Range site: Shabliss—028BY080NV; Yody—028BY086NV; Inclusion 1—028BY011NV; Inclusion 2—028BY014NV; Inclusion 3—028BY083NV; Inclusion 4—028BY052NV

455—Shabliss-Tulase-Linoyer association

Map Unit Setting

Position on landscape: Fan piedmonts and fan skirts

Composition

Major components:

- Shabliss gravelly loam, 2 to 4 percent slopes—40 percent
- Tulase silt loam, 2 to 4 percent slopes—30 percent
- Linoyer very fine sandy loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 2 to 4 percent slopes—9 percent
- Inclusion 2: Blimo gravelly loam, 2 to 4 percent slopes—4 percent
- Inclusion 3: Heist silt loam, 0 to 4 percent slopes—2 percent

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash

Slope range: 2 to 4 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 5.5 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts and inset fans adjacent to fluves

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 2 to 4 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts and inset fans

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 11.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Lower fan piedmont remnants adjacent to inset fans and fan skirts

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts and inset fans

Distinctive present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans and fan skirts

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Tulasé—Ile, Linoyer—Ile, irrigated; Shabliss VII, Tulasé—Vic, Linoyer—Vle, nonirrigated

Range site: Shabliss—028BY080NV; Tulasé—028BY045NV; Linoyer—028BY013NV; Inclusion 1—028BY010NV; Inclusion 2—028BY014NV; Inclusion 3—028BY084NV

458—Shabliss-Pyrat-Palinor association**Map Unit Setting**

Position on landscape: Fan piedmonts

Composition

Major components:

- Shabliss gravelly loam, 4 to 15 percent slopes—55 percent
- Pyrat gravelly sandy loam, 2 to 8 percent slopes—20 percent
- Palinor gravelly loam, 4 to 15 percent slopes—15 percent

Contrasting inclusion:

- Inclusion 1: Kunzler loam, 2 to 8 percent slopes—10 percent

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 5.5 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Slightly concave areas on fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Palnor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusion

Inclusion 1

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts adjacent to fan piedmont remnants

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Shabliss, Pyrat and Palinor soils—VIIIs, nonirrigated

Range site: Shabliss—028BY080NV; Pyrat—028BY010NV; Palinor—028BY011NV; Inclusion 1—028BY028NV

471—Hessing-Tulase association

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major components:

- Hessing silt loam, 2 to 4 percent slopes—60 percent
- Tulase silt loam, 0 to 4 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 2 to 4 percent slopes—10 percent
- Inclusion 2: Nyala sandy loam, 0 to 4 percent slopes—3 percent
- Inclusion 3: Heist silt loam, 2 to 4 percent slopes—2 percent

Characteristics of the Hessing Soil

Classification: Typic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Loess and silty alluvium over mixed alluvium

Slope range: 2 to 4 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 4 to 14 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 14 to 31 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Depth: 31 to 60 inches

Texture: Stratified extremely gravelly coarse sand and extremely gravelly sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.5 to 7.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—3; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to fluves

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Upper fan skirts

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Lower fan skirts

Distinctive present vegetation: Shadscale, winterfat, Indian ricegrass, galleta

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Hessing—IIs, Tulase—Ile, irrigated; Hessing—VIIIs, Tulase—VIc, nonirrigated

Range site: Hessing—028BY075NV; Tulase—028BY045NV; Inclusion 1—028BY010NV; Inclusion 2—029XY090NV; Inclusion 3—028BY084NV

472—Broyles-Blimo association

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major components:

- Broyles very fine sandy loam, 0 to 2 percent slopes—65 percent

- Blimo gravelly loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Typic Natrargids silt loam, 0 to 2 percent slopes—10 percent

- Inclusion 2: Kunzler silt loam, 0 to 2 percent slopes—3 percent

- Inclusion 3: Linoyer very fine sandy loam, 0 to 2 percent slopes—2 percent

Characteristics of the Broyles Soil

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Thin loess mantle over mixed loamy alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 12 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 12 to 60 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 6.0 to 7.5 inches
Water-supplying capacity: 5 to 7 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Low

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Fan skirts
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches
Texture: Gravelly sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Very hard, firm
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 4.5 to 7.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Natrargids, fine, montmorillonitic, mesic
Position on landscape: Lake plains adjacent to fan skirts
Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Fan skirts
Distinctive present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Fan skirts
Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Broyles—IIs, irrigated; Broyles—VIIc, Blimo—VIs, nonirrigated
Range site: Broyles—028BY017NV; Blimo—028BY014NV; Inclusion 1—028BY009NV; Inclusion 2—028BY056NV; Inclusion 3—028BY013NV

473—Broyles-Sheffit-Katelana association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Broyles very fine sandy loam, 0 to 2 percent slopes—40 percent

- Sheffit silt loam, 0 to 2 percent slopes—30 percent
 - Katelana silt loam, 0 to 2 percent slopes—15 percent
- Contrasting inclusions:*
- Inclusion 1: Kunzler silt loam, 0 to 2 percent slopes—7 percent
 - Inclusion 2: Katelana silt loam, 0 to 2 percent slopes—4 percent
 - Inclusion 3: Zorravista very fine sandy loam, 4 to 15 percent slopes—3 percent
 - Inclusion 4: Zerk gravelly loam, 0 to 2 percent slopes—1 percent

Characteristics of the Broyles Soil

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Outer margins of lake plains

Parent material: Thin loess mantle over mixed loamy alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 12 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 12 to 60 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 6.0 to 7.5 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Sheffit Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 3 to 60 inches

Texture: Stratified silt loam to clay

Structure: Massive

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 8.5 to 10.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Very slow

Hydrologic group: D

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Alluvium derived from limestone over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Shadscale, black greasewood, squirreltail

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Prismatic parting to platy
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches
Texture: Silt loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches
Texture: Silty clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 13.0 to 16.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow

Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Beach plains adjacent to lake plains
Distinctive present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Inclusion 2

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Lake plains
Distinctive present vegetation: Shadscale, squirreltail

Inclusion 3

Classification: Xeric Torripsamments, mixed, mesic
Position on landscape: Dunes on lake plains
Distinctive present vegetation: Black greasewood, Indian ricegrass

Inclusion 4

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic
Position on landscape: Offshore bars on lake plains
Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Broyles—IIs, irrigated; Broyles—VIIc, Sheffit and Katelana—VIIs, nonirrigated
Range site: Broyles—028BY017NV; Sheffit—028BY028NV; Katelana—028BY074NV; Inclusion 1—028BY056NV; Inclusion 2—028BY073NV; Inclusion 3—028BY021NV; Inclusion 4—028BY075NV

480—Pioche-Cropper association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pioche extremely stony loam, 15 to 50 percent slopes—50 percent
- Cropper very cobbly loam, 15 to 50 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Roden very gravelly clay loam, 15 to 50 percent slopes—10 percent
- Inclusion 2: McIvey very gravelly loam, 15 to 50 percent slopes—3 percent
- Inclusion 3: Rock outcrop—2 percent

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Extremely stony loam

Structure: Angular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Characteristics of the Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1;
wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, clayey-skeletal,
montmorillonitic (calcareous), mesic, shallow

Position on landscape: Lower, south-facing side slopes of
mountains

Distinctive present vegetation: Singleleaf pinyon, Utah
juniper, mountain big sagebrush, bluebunch
wheatgrass

Inclusion 2

Classification: Typic Argixerolls, clayey-skeletal,
montmorillonitic, frigid

Position on landscape: Concave, north-facing side slopes
of mountains

Distinctive present vegetation: Mountain big sagebrush,
bluebunch wheatgrass

Inclusion 3

Position on landscape: Crests and side slopes of
mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Pioche and Cropper—VIIIs,
nonirrigated

Range site: Pioche—028BY062NV; Cropper—
028BY058NV; Inclusion 1—028BY060NV; Inclusion
2—028BY015NV; Inclusion 3—none

481—Pioche-Segura-Cropper association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pioche extremely stony loam, 15 to 50 percent slopes—40 percent
- Segura very cobbly loam, 8 to 30 percent slopes—30 percent
- Cropper very cobbly loam, 8 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Lithic Xeric Torriorthents very gravelly loam, 8 to 30 percent slopes—10 percent

- Inclusion 2: Upatad very gravelly silt loam, 4 to 15 percent slopes—2 percent
- Inclusion 3: Aridic Haploxerolls gravelly loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Rock outcrop—1 percent

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal,
montmorillonitic, mesic

Position on landscape: South-facing side slopes of
mountains

Parent material: Residuum and colluvium derived from
andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah
juniper, mountain big sagebrush, bluebunch
wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles,
15 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Extremely stony loam

Structure: Angular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1;
 wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Low

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid
Position on landscape: Side slopes of mountains
Parent material: Residuum and colluvium derived from
 andesite, quartzite, or conglomerate
Slope range: 8 to 30 percent
Elevation: 7,000 to 7,500 feet
Dominant present vegetation: Mountain big sagebrush,
 bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 45 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles,
 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches
Texture: Very cobbly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches
Texture: Sandy clay loam
Structure: Angular blocky
Consistence: Slightly hard, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 7 to 14 inches
Depth to a seasonal high water table: More than 60
 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 6.5 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1;
 wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed,
 frigid
Position on landscape: North-facing side slopes of
 mountains
Parent material: Residuum and colluvium derived from
 andesite or conglomerate
Slope range: 8 to 30 percent
Elevation: 7,000 to 7,500 feet
Dominant present vegetation: Singleleaf pinyon, curlleaf
 mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles,
 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches
Texture: Very cobbly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches
Texture: Extremely gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60
 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1;
 wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Lower, south-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Classification: Aridic Haploxerolls, loamy-skeletal, mixed, mesic

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Pioche, Segura, and Cropper—VIIs, nonirrigated

Range site: Pioche—028BY062NV; Segura—028BY087NV; Cropper—028BY058NV; Inclusion 1—028BY060NV; Inclusion 2—028BY093NV; Inclusion 3—028BY007NV; Inclusion 4—none

483—Pioche-Upatad-Birchcreek association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pioche extremely stony loam, 15 to 50 percent slopes—35 percent
- Upatad very gravelly silt loam, 15 to 50 percent slopes—30 percent
- Birchcreek very cobbly loam, 15 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Atlow very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: McIvey very cobbly loam, 8 to 30 percent slopes—5 percent
- Inclusion 3: Aridic Haploxerolls gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Rock outcrop—2 percent

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Extremely stony loam

Structure: Angular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.0 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1;
 wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Low

Characteristics of the Upatad Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Convex side slopes of mountains
Parent material: Residuum and colluvium derived from andesite
Slope range: 15 to 50 percent
Elevation: 7,000 to 7,500 feet
Dominant present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 40 percent

Depth: 0 to 3 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches
Texture: Very gravelly silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow

Available water capacity: 1.4 to 2.1 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1;
 wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Birchcreek Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Slightly concave, north-facing side slopes of mountains
Parent material: Residuum and colluvium derived from andesite and conglomerate
Slope range: 15 to 30 percent
Elevation: 7,000 to 7,500 feet
Dominant present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 10 percent; pebbles, 20 percent

Depth: 0 to 3 inches
Texture: Very cobbly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches
Texture: Very cobbly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 10 to 28 inches
Texture: Very cobbly clay
Structure: Prismatic
Consistence: Hard, firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 28 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 1.9 to 2.7 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2;
 wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic
Position on landscape: Lower, south-facing side slopes of mountains
Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Inclusion 2

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Concave, north-facing side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Classification: Aridic Haploxerolls, fine-loamy, mixed, mesic
Position on landscape: Narrow drainageways on mountains
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains
Distinctive present vegetation: None

Interpretive Groups

Capability classification: Pioche and Upatad—VIIIs, Birchcreek—VIs, nonirrigated
Range site: Pioche—028BY062NV; Upatad—028BY093NV; Birchcreek—028BY046NV; Inclusion 1—028BY089NV; Inclusion 2—028BY087NV; Inclusion 3—028BY007NV; Inclusion 4—none

484—Pioche-Birchcreek-Cropper association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pioche extremely stony loam, 15 to 50 percent slopes—50 percent
- Birchcreek very cobbly loam, 15 to 50 percent slopes—20 percent
- Cropper very cobbly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Upatad very gravelly silt loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Cassiro stony loam, 8 to 30 percent slopes—5 percent
- Inclusion 3: Aridic Argixerolls gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Rock outcrop—2 percent

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: South-facing side slopes of mountains
Parent material: Residuum and colluvium derived from andesite and conglomerate
Slope range: 15 to 50 percent
Elevation: 7,000 to 7,500 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles, 15 percent; pebbles, 30 percent
Depth: 0 to 3 inches
Texture: Extremely stony loam
Structure: Angular blocky
Consistence: Slightly hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches
Texture: Very cobbly clay
Structure: Angular blocky
Consistence: Hard, firm
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 1.5 to 2.0 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Low

Characteristics of the Birchcreek Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Slightly concave side slopes of mountains
Parent material: Residuum and colluvium derived from andesite and conglomerate
Slope range: 15 to 50 percent
Elevation: 7,000 to 7,500 feet
Dominant present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 10 percent; pebbles, 20 percent
Depth: 0 to 3 inches
Texture: Very cobbly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches
Texture: Very cobbly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 10 to 28 inches
Texture: Very cobbly clay
Structure: Prismatic
Consistence: Hard, firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 28 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 1.9 to 2.7 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: North-facing side slopes of mountains
Parent material: Residuum and colluvium derived from andesite and conglomerate
Slope range: 15 to 50 percent
Elevation: 7,000 to 7,500 feet
Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches
Texture: Very cobbly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches
Texture: Extremely gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Convex side slopes of mountains
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 2

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: Valley fans of mountains
Distinctive present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Aridic Argixerolls, fine-loamy, mixed, mesic
Position on landscape: Narrow drainageways on mountains
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains
Distinctive present vegetation: None

Interpretive Groups

Capability classification: Pioche and Cropper—VIIIs, Birchcreek—VIs, nonirrigated
Range site: Pioche—028BY062NV; Birchcreek—028BY046NV; Cropper—028BY058NV; Inclusion 1—028BY093NV; Inclusion 2—028BY046NV; Inclusion 3—028BY007NV; Inclusion 4—none

486—Pioche-Cropper-Upatad association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pioche extremely stony loam, 15 to 50 percent slopes—50 percent
- Cropper very cobbly loam, 15 to 50 percent slopes—20 percent
- Upatad very gravelly silt loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Lithic Xeric Torriorthents very gravelly loam, 15 to 50 percent slopes—4 percent
- Inclusion 2: McIvey very cobbly loam, 15 to 50 percent slopes—3 percent
- Inclusion 3: McIvey very cobbly loam, 15 to 50 percent slopes—2 percent
- Inclusion 4: Xerollic Haplargids very gravelly loam, 8 to 30 percent slopes—1 percent

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: South-facing side slopes of mountains
Parent material: Residuum and colluvium derived from andesite and conglomerate
Slope range: 15 to 50 percent
Elevation: 6,800 to 7,500 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Extremely stony loam

Structure: Angular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Characteristics of the Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Upatad Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum and colluvium derived from andesite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 40 percent

Depth: 0 to 3 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very gravelly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.4 to 2.1 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Lower, south-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave, north-facing side slopes of mountains

Distinctive present vegetation: Wyoming big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave, north-facing side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 4

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic

Position on landscape: Lower, north-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Pioche, Cropper, and Upatad—Vlls, nonirrigated

Range site: Pioche—028BY062NV; Cropper—028BY058NV; Upatad—028BY093NV; Inclusion 1—028BY060NV; Inclusion 2—028BY087NV; Inclusion 3—028BY087NV; Inclusion 4—028BY062NV

489—Pioche-Mclvey-Birchcreek association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pioche extremely stony loam, 15 to 50 percent slopes—40 percent
- Mclvey very cobbly loam, 15 to 50 percent slopes—30 percent
- Birchcreek very cobbly loam, 15 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—5 percent
- Inclusion 2: Mclvey very cobbly loam, 4 to 15 percent slopes—5 percent

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Extremely stony loam

Structure: Angular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave, north-facing side slopes of mountains

Parent material: Colluvium derived from andesite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 5.0 to 7.5 inches

Water-supplying capacity: 10 to 18 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Birchcreek Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Slightly concave side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 30 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Antelope bitterbrush,
mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles,
10 percent; pebbles, 20 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches

Texture: Very cobbly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 10 to 28 inches

Texture: Very cobbly clay

Structure: Prismatic

Consistence: Hard, firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 28 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.9 to 2.7 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2;
wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of
mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Typic Argixerolls, clayey-skeletal,
montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush,
bluebunch wheatgrass, Thurber needlegrass

Interpretive Groups

Capability classification: Pioche and McIvey—VIIIs,
Birchcreek—VIs, nonirrigated

Range site: Pioche—028BY062NV; McIvey—
028BY087NV; Birchcreek—028BY046NV; Inclusion
1—none; Inclusion 2—028BY087NV

490—Kunzler loam, 0 to 2 percent slopes

Map Unit Setting

Position on landscape: Stream terraces

Composition

Major component:

- Kunzler loam, 0 to 2 percent slopes—90 percent

Contrasting inclusion:

- Inclusion 1: Sheffit loam, 0 to 2 percent slopes—10 percent

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy,
mixed, mesic

Position on landscape: Stream terraces

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Black greasewood, big
sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches

Texture: Loam

Structure: Platy*Consistence:* Soft, very friable*Reaction:* Moderately alkaline*Salinity:* Less than 2 mmhos per cm*Depth:* 10 to 26 inches*Texture:* Loam*Structure:* Subangular blocky*Consistence:* Hard, friable*Reaction:* Very strongly alkaline*Salinity:* 2 to 4 mmhos per cm*Depth:* 26 to 60 inches*Texture:* Sandy loam*Structure:* Massive*Consistence:* Hard, brittle*Reaction:* Very strongly alkaline*Salinity:* 4 to 16 mmhos per cm**Soil and Water Features***Depth to a seasonal high water table:* More than 60 inches*Frequency of flooding:* None*Permeability:* Moderately slow*Available water capacity:* 6.5 to 9.0 inches*Water-supplying capacity:* 8 to 12 inches*Runoff:* Slow*Hydrologic group:* B*Erosion factors (surface layer):* K value—.37; T value—5; wind erodibility group—4L*Hazard of erosion:* By water—slight; by wind—slight*Shrink-swell potential:* Low*Corrosivity:* Steel—high; concrete—moderate*Potential for frost action:* Moderate**Contrasting Inclusion****Inclusion 1***Classification:* Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic*Position on landscape:* Alluvial flats adjacent to stream terraces*Distinctive present vegetation:* Wyoming big sagebrush, black greasewood**Interpretive Groups***Capability classification:* Kunzler—VIIc, nonirrigated*Range site:* Kunzler—02BY028NV; Inclusion 1—028BY028NV**491—Kunzler-Katelana association****Map Unit Setting***Position on landscape:* Stream terraces and basin floors**Composition***Major components:*

- Kunzler loam, 0 to 2 percent slopes—65 percent

- Katelana silt loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Kunzler loam, 2 to 8 percent slopes—5 percent

- Inclusion 2: Duffer silt loam, 0 to 2 percent slopes—5 percent

- Inclusion 3: Sycomat sandy loam, 0 to 2 percent slopes—3 percent

- Inclusion 4: Boofuss silty clay, 0 to 2 percent slopes—2 percent

Characteristics of the Kunzler Soil*Classification:* Durixerollic Calciorthids, coarse-loamy, mixed, mesic*Position on landscape:* Stream terraces*Parent material:* Mixed alluvium*Slope range:* 0 to 2 percent*Elevation:* 6,000 to 6,400 feet*Dominant present vegetation:* Black greasewood, big sagebrush, basin wildrye**Climatic Data***Average annual precipitation:* About 10 inches*Average annual air temperature:* About 48 degrees F*Frost-free period:* About 120 days**Typical Profile***Surface cover:* Pebbles, 5 percent*Depth:* 0 to 10 inches*Texture:* Loam*Structure:* Platy*Consistence:* Soft, very friable*Reaction:* Moderately alkaline*Salinity:* Less than 2 mmhos per cm*Depth:* 10 to 26 inches*Texture:* Loam*Structure:* Subangular blocky*Consistence:* Hard, friable*Reaction:* Very strongly alkaline*Salinity:* 2 to 4 mmhos per cm*Depth:* 26 to 60 inches*Texture:* Sandy loam*Structure:* Massive*Consistence:* Hard, brittle*Reaction:* Very strongly alkaline*Salinity:* 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 6.5 to 9.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Alluvial flats
Parent material: Alluvium derived from limestone over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,400 feet
Dominant present vegetation: Shadscale, black greasewood, squirreltail

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Prismatic parting to platy
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches
Texture: Silt loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches
Texture: Silty clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 13.0 to 16.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Stream terraces
Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic
Position on landscape: Axial-stream flood plains adjacent to stream terraces
Distinctive present vegetation: Black greasewood, basin wildrye, alkali sacaton

Inclusion 3

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Stream terraces
Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Inclusion 4

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic

Position on landscape: Axial-stream flood plains adjacent to stream terraces

Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Interpretive Groups

Capability classification: Kunzler—VIIc, Katelana—VIIs, nonirrigated

Range site: Kunzler: 028BY028NV; Katelana—028BY074NV; Inclusion 1—028BY028NV; Inclusion 2—028BY004NV; Inclusion 3—028BY074NV; Inclusion 4—028BY020NV

500—Segura-Mclvey-Hutchley association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Segura very cobbly loam, 15 to 50 percent slopes—45 percent
- Mclvey very gravelly loam, 30 to 50 percent slopes—25 percent
- Hutchley very gravelly loam, 8 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Garfan very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Mclvey gravelly loam, 8 to 30 percent slopes—5 percent
- Inclusion 3: Typic Argixerolls gravelly silt loam, 4 to 15 percent slopes—3 percent
- Inclusion 4: Rock outcrop—2 percent

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite, quartzite, and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,200 feet

Dominant present vegetation: Bluebunch wheatgrass, mountain big sagebrush

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Sandy clay loam

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Mclvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from andesite, quartzite, or conglomerate

Slope range: 30 to 50 percent

Elevation: 7,500 to 8,200 feet

Dominant present vegetation: Bluebunch wheatgrass, Idaho fescue, antelope bitterbrush, mountain big sagebrush

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches
Texture: Very gravelly clay loam
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches
Texture: Extremely cobbly clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.05; T value—5; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Hutchley Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Crests and convex side slopes of mountains
Parent material: Residuum derived from andesite, quartzite, or conglomerate
Slope range: 8 to 30 percent
Elevation: 7,500 to 8,200 feet
Dominant present vegetation: Low sagebrush, black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 70 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 15 percent; pebbles, 45 percent

Depth: 0 to 3 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches
Texture: Very gravelly clay loam
Structure: Subangular blocky
Consistence: Very hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 1.3 inches
Water-supplying capacity: 6.5 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Paleargids, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Upper, north-facing, concave side slopes of mountains
Distinctive present vegetation: Antelope bitterbrush, low sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Lower, concave side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Lower side slopes of mountains
Distinctive present vegetation: Eriogonum, Letterman needlegrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Segura and McIvey soils—VIIs, Hutchley soil—VIe, nonirrigated

Range site: Segura soil—025XY042NV; McIvey soil—025XY012NV; Hutchley soil—028BY034NV; Inclusion 1—028BY035NV; Inclusion 2—028BY030NV; Inclusion 3—028BY051NV; Inclusion 4—none

510—Onkeyo-Cavehill-Pookaloo association**Map Unit Setting**

Position on landscape: Mountains

Composition

Major components:

- Onkeyo very gravelly silt loam, 15 to 50 percent slopes—50 percent
- Cavehill very gravelly silt loam, 15 to 50 percent slopes—20 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Wardbay very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Pachic Haploxerolls gravelly silt loam, 8 to 15 percent slopes—5 percent
- Inclusion 3: Haunchee very gravelly loam, 15 to 50 percent slopes—3 percent
- Inclusion 4: Rock outcrop—2 percent

Characteristics of the Onkeyo Soil

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 8 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 15 inches

Texture: Very cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 0.5 inch to 2.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Upper side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthis, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Upper, north-facing side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Pachic Haploxerolls, fine-loamy, mixed, frigid

Position on landscape: Lower, concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Upper, north-facing side slopes of mountains; adjacent to areas of rock outcrop

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Onkeyo, Cavehill, and Pookaloo soils—VIIIs, nonirrigated

Range site: Onkeyo soil—028BY079NV; Cavehill soil—028BY062NV; Pookaloo soil—028BY060NV; Inclusion 1—028BY070NV; Inclusion 2—028BY030NV; Inclusion 3—028BY043NV; Inclusion 4—none

520—McIvey-Pioche association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- McIvey very gravelly loam, 8 to 30 percent slopes—50 percent
- Pioche extremely stony loam, 15 to 50 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Cassiro stony loam, 2 to 8 percent slopes—7 percent
- Inclusion 2: Eoj very stony loam, 4 to 15 percent slopes—5 percent
- Inclusion 3: Pern silt loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Segura very cobbly loam, 15 to 50 percent slopes—1 percent

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Side slopes of mountains

Parent material: Colluvium derived from andesite, quartzite, or conglomerate

Slope range: 8 to 30 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 5.0 to 7.5 inches

Water-supplying capacity: 10 to 18 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.05; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Extremely stony loam

Structure: Angular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Upper, slightly concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Typic Palexerolls, fine, montmorillonitic, frigid

Position on landscape: Slightly convex side slopes of mountains

Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 4

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Mclvey and Pioche soils—VIIIs, nonirrigated

Range site: Mclvey soil—028BY015NV; Pioche soil—028BY062NV; Inclusion 1—028BY030NV; Inclusion 2—028BY037NV; Inclusion 3—028BY003NV; Inclusion 4—028BY087NV

531—Duffer-Uwell association

Map Unit Setting

Position on landscape: Basin floors

Composition

Major components:

- Duffer silt loam, 0 to 2 percent slopes—60 percent
- Uwell silt loam, 0 to 2 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Durorthidic Xeric Torriorthents silt loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Sheffit silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 3: Pern silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Axial-stream flood plains terminating on lake plains

Parent material: Mixed alluvium and lake sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Black greasewood, basin wildrye, alkali sacaton

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 36 to 60 inches

Frequency of flooding: Rare

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Characteristics of the Uwell Soil

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 26 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Silty clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 9.0 to 13.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Terraces on lake plains

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 3

Classification: Calcorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Outer margins of axial-stream flood plains

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Duffer soil—IVw, irrigated; Duffer soil—VIw, Uwell soil—VIIs, nonirrigated

Range site: Duffer soil—028BY004NV; Uwell soil—028BY045NV; Inclusion 1—028BY010NV; Inclusion 2—028BY028NV; Inclusion 3—028BY003NV

534—Duffer-Kolda association

Map Unit Setting

Position on landscape: Basin floors

Composition

Major components:

- Duffer silt loam, 0 to 2 percent slopes—40 percent
- Duffer silt loam, moist, 0 to 2 percent slopes—30 percent
- Kolda silt loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Sheffit silt loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Aeris Halaquepts silty clay loam, 0 to 2 percent slopes—5 percent

Characteristics of the Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Axial-stream flood plains

Parent material: Mixed alluvium and lake sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Black greasewood, basin wildrye, alkali sacaton

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 36 to 60 inches

Frequency of flooding: Rare

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Characteristics of the Moist Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Axial-stream flood plains

Parent material: Mixed alluvium and lake sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 18 to 36 inches

Flooding: Occasional, for very brief periods, from January through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Characteristics of the Kolda Soil

Classification: Typic Haplaquolls, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains adjacent to springs and seeps

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Bluegrass, sedge, rush

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 6 to 22 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches

Texture: Clay

Structure: Prismatic

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 0 to 18 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 12 to 16 inches

Runoff: Very slow

Hydrologic group: D

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Aeric Halaquepts, fine-silty, mixed (calcareous), mesic

Position on landscape: Lake plains adjacent to springs and seeps

Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Interpretive Groups

Capability classification: Duffer soils—IVw, Kolda soil—Vlw, irrigated; Duffer soil—Vlw, Kolda soil and the moist Duffer soil—VIIw, nonirrigated

Range site: Duffer soil—028BY004NV; the moist Duffer soil—028BY002NV; Kolda soil—028BY001NV;

Inclusion 1—028BY028NV; Inclusion 2—028BY020NV

540—Kolda-Sheffit-Equis association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Kolda silt loam, 0 to 2 percent slopes—40 percent
- Sheffit silt loam, 0 to 2 percent slopes—35 percent

- Equis silt loam, 0 to 2 percent slopes—15 percent

Contrasting inclusion:

- Inclusion 1: Aeric Halaquepts silty clay loam, 0 to 2 percent slopes—10 percent

Characteristics of the Kolda Soil

Classification: Typic Haplaquolls, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains adjacent to springs and seeps
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Bluegrass, sedge, rush

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Very strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 6 to 22 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Very strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches
Texture: Clay
Structure: Prismatic
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 0 to 18 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 12 to 16 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: High

Characteristics of the Sheffit Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Very strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 3 to 60 inches
Texture: Stratified silt loam to clay
Structure: Massive
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 8.5 to 10.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Equis Soil

Classification: Typic Halaquepts, fine, carbonatic, mesic
Position on landscape: Lake plains adjacent to springs and seeps
Parent material: Lacustrine sediments and mixed alluvium
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile*Depth:* 0 to 6 inches*Texture:* Silt loam*Structure:* Prismatic*Consistence:* Very hard, very firm*Reaction:* Strongly alkaline*Salinity:* 4 to 8 mmhos per cm*Sodicity:* SAR 40 to 70*Depth:* 6 to 30 inches*Texture:* Silty clay*Structure:* Prismatic*Consistence:* Very hard, very firm*Reaction:* Strongly alkaline*Salinity:* 8 to 16 mmhos per cm*Sodicity:* SAR 40 to 70*Depth:* 30 to 50 inches*Texture:* Silty clay*Structure:* Angular blocky*Consistence:* Very hard, very firm*Reaction:* Strongly alkaline*Salinity:* 4 to 8 mmhos per cm*Sodicity:* SAR less than 5*Depth:* 50 to 60 inches*Texture:* Silt loam*Structure:* Massive*Consistence:* Very hard, very firm*Reaction:* Strongly alkaline*Salinity:* Less than 4 mmhos per cm*Sodicity:* SAR less than 5**Soil and Water Features***Depth to a seasonal high water table:* 12 to 36 inches*Frequency of flooding:* Rare*Permeability:* Very slow*Available water capacity:* 8.5 to 12.5 inches*Water-supplying capacity:* 9 to 12 inches*Runoff:* Slow*Hydrologic group:* D*Erosion factors (surface layer):* K value—.37; T value—5;
wind erodibility group—4L*Hazard of erosion:* By water—slight; by wind—slight*Shrink-swell potential:* High*Corrosivity:* Steel—high; concrete—high*Potential for frost action:* Moderate**Contrasting Inclusion****Inclusion 1***Classification:* Aerie Halaquepts, fine-silty, mixed
(calcareous), mesic*Position on landscape:* Lake plains adjacent to springs
and seeps*Distinctive present vegetation:* Black greasewood, alkali
sacaton, inland saltgrass**Interpretive Groups***Capability classification:* Kolda soil—Vlw, irrigated; Kolda
soil—VIIw, Sheffit soil—VIIs, Equis soil—Vlw,
nonirrigated*Range site:* Kolda soil—028BY001NV; Sheffit soil—
028BY028NV; Equis soil—028BY002NV; Inclusion
1—028BY020NV**541—Kolda-Duffer association****Map Unit Setting***Position on landscape:* Basin floors**Composition***Major components:*

- Kolda silt loam, 0 to 2 percent slopes—45 percent
- Duffer silt loam, 0 to 2 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Cumulic Haplaquolls silt loam, 0 to 2 percent slopes—6 percent
- Inclusion 2: Boofuss silty clay, 0 to 2 percent slopes—6 percent
- Inclusion 3: Duffer silt loam, 0 to 2 percent slopes—3 percent

Characteristics of the Kolda Soil*Classification:* Typic Haplaquolls, fine, montmorillonitic
(calcareous), mesic*Position on landscape:* Lake plains adjacent to springs
and seeps*Parent material:* Mixed alluvium over lacustrine
sediments*Slope range:* 0 to 2 percent*Elevation:* 5,800 to 6,200 feet*Dominant present vegetation:* Bluegrass, sedge,
rush**Climatic Data***Average annual precipitation:* About 9 inches*Average annual air temperature:* About 46 degrees F*Frost-free period:* About 110 days**Typical Profile***Depth:* 0 to 6 inches*Texture:* Silt loam*Structure:* Subangular blocky*Consistence:* Soft, very friable*Reaction:* Very strongly alkaline*Salinity:* 4 to 8 mmhos per cm

Depth: 6 to 22 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Very strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches
Texture: Clay
Structure: Prismatic
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 0 to 18 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 12 to 16 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.55; T value—5;
 wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: High

Characteristics of the Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic
Position on landscape: Axial-stream flood plains
Parent material: Mixed alluvium and lake sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches
Texture: Silty clay loam
Structure: Massive

Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 18 to 36 inches
Flooding: Occasional, for very brief periods, from January through June
Permeability: Moderately slow
Available water capacity: 11.5 to 12.5 inches
Water-supplying capacity: 11 to 13 inches
Runoff: Very slow
Hydrologic group: C
Erosion factors (surface layer): K value—.37; T value—5;
 wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Cumulic Haplaquolls, fine, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains adjacent to springs and seeps
Distinctive present vegetation: Bluegrass, sedge, rush

Inclusion 2

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains
Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Inclusion 3

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic
Position on landscape: Axial-stream flood plains
Distinctive present vegetation: Black greasewood, basin wildrye, alkali sacaton

Interpretive Groups

Capability classification: Kolda soil—VIw, Duffer soil—IVw, irrigated; Kolda and Duffer soils—VIIw, nonirrigated
Range site: Kolda soil—028BY001NV; Duffer soil—028BY002NV; Inclusion 1—028BY001NV; Inclusion 2—028BY020NV; Inclusion 3—028BY004NV

542—Devilsgait-Duffer association

Map Unit Setting

Position on landscape: Axial-stream flood plains

Composition

Major components:

- Devilsgait silt loam, 0 to 2 percent slopes—50 percent
- Devilsgait silt loam, wet, 0 to 2 percent slopes—20 percent
- Duffer silt loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Equis silty clay, 0 to 2 percent slopes—8 percent
- Inclusion 2: Duffer silt loam, 0 to 2 percent slopes—7 percent

Characteristics of the Devilsgait Soil

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Axial-stream flood plains adjacent to stream channels

Parent material: Mixed silty alluvium and some loess and ash

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Bluegrass, sedge, rush

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 10 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 60 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 0 to 18 inches

Flooding: Frequent, for long periods, from March through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 10 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: High

Characteristics of the Wet Devilsgait Soil

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Ponded areas on axial-stream flood plains adjacent to stream channels

Parent material: Mixed silty alluvium with a component of loess and ash

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Bulrush, cattail

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 10 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 60 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 0 to 18 inches

Flooding: Frequent, for long periods, from March through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 10 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: High

Characteristics of the Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Outer margins of axial-stream flood plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 18 to 36 inches

Flooding: Occasional, for very brief periods, from March through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Axial-stream flood plains

Distinctive present vegetation: Alkali sacaton, alkali cordgrass

Inclusion 2

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Axial-stream flood plains adjacent to areas of stream channel entrenchment

Distinctive present vegetation: Black greasewood, basin wildrye, alkali sacaton

Interpretive Groups

Capability classification: Devilsgait soils—Vw, Duffer soil—IVw, irrigated; Devilsgait soils—VIw, Duffer soil—VIIw, nonirrigated

Range site: Devilsgait soil—028BY001NV; the wet Devilsgait soil—028BY044NV; Duffer soil—028BY002NV; Inclusion 1—028BY002NV; Inclusion 2—028BY004NV

550—Molion-Unsel-Breko association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Molion very gravelly sandy loam, 2 to 8 percent slopes—35 percent
- Unsel gravelly fine sandy loam, 2 to 8 percent slopes—35 percent
- Breko gravelly sandy loam, 2 to 8 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Heist silt loam, 2 to 8 percent slopes—10 percent
- Inclusion 2: Typic Torriorthents sandy loam, 2 to 8 percent slopes—5 percent

Characteristics of the Molion Soil

Classification: Haploxerollic Durorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Slightly convex areas on fan piedmont remnants

Parent material: Mixed alluvium with a component of loess

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 52 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 14 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 25 inches

Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.7 to 1.0 inch

Water-supplying capacity: 5 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.05; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Unsel Soil

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Upper, slightly concave areas on fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Shadscale, gallet, Bailey greasewood, bud sagebrush

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 4 inches

Texture: Gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 14 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 22 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, brittle

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches

Texture: Very gravelly loamy sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 3.0 to 5.0 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.20; T value—3; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the Breko Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Lower fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 9 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 26 inches

Texture: Extremely gravelly sandy clay loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 4.5 inches

Water-supplying capacity: 5 to 6 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.24; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass
Inclusion 2

Classification: Typic Torriorthents, sandy-skeletal, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Fourwing saltbush, winterfat, Indian ricegrass, galleta

Interpretive Groups

Capability classification: Molion soil—IVe, Unsel soil—IIIe, irrigated; Molion and Breko soils—VIIs, Unsel soil—VIIc, nonirrigated

Range site: Molion soil—029XY008NV; Unsel soil—029XY017NV; Breko soil—029XY006NV; Inclusion 1—028BY084NV; Inclusion 2—029XY012NV

552—Molion very gravelly sandy loam, 2 to 8 percent slopes

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major component:

- Molion very gravelly sandy loam, 2 to 8 percent slopes—90 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Typic Camborthids silt loam, 4 to 8 percent slopes—2 percent
- Inclusion 3: Heist silt loam, 2 to 4 percent slopes—2 percent
- Inclusion 4: Xerollic Durargids, 2 to 8 percent slopes—1 percent

Characteristics of the Molion Soil

Classification: Haploxerollic Durorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Slightly convex areas on fan piedmont remnants

Parent material: Mixed alluvium with a component of loess

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,400 feet

Dominant present vegetation: Black sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 52 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 14 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 25 inches

Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.7 to 1.0 inch

Water-supplying capacity: 5 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.05; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mixed

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Typic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Xerollic Durargids

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Interpretive Groups

Capability classification: Molion soil—Ive, irrigated, VIIs, nonirrigated

Range site: Molion soil—028BY011NV; Inclusion 1—028BY010NV; Inclusion 2—028BY075NV; Inclusion 3—028BY084NV; Inclusion 4—029XY006NV

561—McIvey-Pioche-Upatad association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- McIvey very gravelly loam, 15 to 50 percent slopes—40 percent
- Pioche extremely stony loam, 15 to 50 percent slopes—25 percent
- Upatad very gravelly silt loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Atlow very gravelly loam, 8 to 30 percent slopes—10 percent
- Inclusion 2: Upatad very gravelly silt loam, 15 to 50 percent slopes—3 percent
- Inclusion 3: Cassiro stony loam, 4 to 15 percent slopes—2 percent

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 5.0 to 7.5 inches

Water-supplying capacity: 10 to 18 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.05; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Extremely stony loam

Structure: Angular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Characteristics of the Upatad Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Crests and side slopes of mountains

Parent material: Residuum and colluvium derived from andesite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 40 percent

Depth: 0 to 3 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very gravelly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.4 to 2.1 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Inclusion 2

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Lower, concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Mclvey, Pioche, and Upatad soils—VIIIs, nonirrigated

Range site: Mclvey soil—028BY015NV; Pioche soil—028BY062NV; Upatad soil—028BY093NV; Inclusion 1—028BY089NV; Inclusion 2—028BY060NV; Inclusion 3—028BY030NV

564—Mclvey-Chen-Suak association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Mclvey very gravelly loam, 30 to 75 percent slopes—30 percent
- Chen very cobbly loam, 30 to 75 percent slopes—30 percent
- Suak very stony loam, 30 to 75 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Mclvey gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 2: Rock outcrop—5 percent
- Inclusion 3: Tusel cobbly loam, 30 to 75 percent slopes—4 percent
- Inclusion 4: Devilsgait silt loam, 2 to 8 percent slopes—1 percent

Characteristics of the Mclvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from andesite, quartzite, or conglomerate

Slope range: 30 to 75 percent

Elevation: 7,000 to 9,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches
Texture: Very gravelly clay loam
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches
Texture: Extremely cobbly clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.05; T value—5; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Chen Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Convex side slopes of mountains
Parent material: Residuum derived from andesite or conglomerate and some loess
Slope range: 30 to 75 percent
Elevation: 7,000 to 9,000 feet
Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 70 percent

Depth: 0 to 7 inches
Texture: Very cobbly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 7 to 17 inches
Texture: Very gravelly clay
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 17 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 12 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Suak Soil

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Side slopes of mountains
Parent material: Residuum and colluvium derived from andesite, quartzite, or conglomerate
Slope range: 30 to 75 percent
Elevation: 7,000 to 9,000 feet
Dominant present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 35 percent

Depth: 0 to 10 inches

Texture: Very stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 10 to 25 inches

Texture: Extremely gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 25 inches

Texture: Quartzite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 inch to 2.0 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.05; T value—2; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Lower, concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Argic Pachic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Upper, concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, mountain brome, Letterman needlegrass

Inclusion 4

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Mountain big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Mclvey, Chen, and Suak soils—VIIIs, nonirrigated

Range site: Mclvey soil—028BY015NV; Chen soil—028BY039NV; Suak soil—028BY032NV; Inclusion 1—028BY030NV; Inclusion 2—none; Inclusion 3—028BY029NV; Inclusion 4—028BY024NV

566—Mclvey-Segura-Cropper association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Mclvey gravelly loam, 15 to 50 percent slopes—35 percent
- Segura very cobbly loam, 15 to 50 percent slopes—30 percent
- Cropper very cobbly loam, 15 to 50 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Rubble land, 8 to 50 percent slopes—5 percent
- Inclusion 2: Suak very stony loam, 15 to 50 percent slopes—5 percent

Characteristics of the Mclvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 5 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 5 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches
Texture: Very gravelly clay loam
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches
Texture: Extremely cobbly clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid
Position on landscape: Slightly convex side slopes of mountains
Parent material: Residuum and colluvium derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent
Elevation: 7,000 to 8,000 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 45 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches
Texture: Very cobbly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches
Texture: Sandy clay loam
Structure: Angular blocky
Consistence: Slightly hard, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 7 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 6.5 to 8 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Convex side slopes of mountains
Parent material: Residuum and colluvium derived from andesite and conglomerate
Slope range: 15 to 50 percent
Elevation: 7,000 to 8,000 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches
Texture: Very cobbly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches
Texture: Extremely gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Side slopes of mountains
Distinctive present vegetation: None

Inclusion 2

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Upper, convex side slopes of mountains
Distinctive present vegetation: Curlleaf

mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: McIvey soil—VIIe, Segura and Cropper soils—VIIs, nonirrigated
Range site: McIvey soil—028BY030NV; Segura soil—028BY087NV; Cropper soil—028BY058NV; Inclusion 1—none; Inclusion 2—028BY032NV

567—McIvey-Birchcreek-Hutchley association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- McIvey cobbly loam, 15 to 50 percent slopes—35 percent
- Birchcreek very cobbly loam, 15 to 50 percent slopes—30 percent
- Hutchley very gravelly loam, 8 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: McIvey very gravelly loam, 15 to 50 percent slopes—7 percent
- Inclusion 2: Rock outcrop—3 percent
- Inclusion 3: Suak very stony loam, 15 to 50 percent slopes—3 percent
- Inclusion 4: Aridic Argixerolls gravelly loam, 8 to 30 percent slopes—2 percent

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Concave side slopes of mountains
Parent material: Colluvium derived from andesite
Slope range: 15 to 50 percent
Elevation: 7,000 to 8,800 feet
Dominant present vegetation: Utah serviceberry, antelope bitterbrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent
Depth: 0 to 12 inches
Texture: Cobbly loam

Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches
Texture: Very gravelly clay loam
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches
Texture: Extremely cobbly clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Birchcreek Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Smooth side slopes of mountains
Parent material: Residuum and colluvium derived from andesite and conglomerate
Slope range: 15 to 50 percent
Elevation: 7,000 to 8,800 feet
Dominant present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 10 percent; pebbles, 20 percent

Depth: 0 to 3 inches
Texture: Very cobbly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches
Texture: Very cobbly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 10 to 28 inches
Texture: Very cobbly clay
Structure: Prismatic
Consistence: Hard, firm
Reaction: Neutral

Depth: 28 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 1.9 to 2.7 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Hutchley Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Crests and convex side slopes of mountains
Parent material: Residuum derived from andesite, quartzite, or conglomerate
Slope range: 8 to 30 percent
Elevation: 7,000 to 8,800 feet
Dominant present vegetation: Low sagebrush, black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F

Frost-free period: About 70 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 15 percent; pebbles, 45 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Very hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.3 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper, convex side slopes of mountains

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Aridic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Low sagebrush, black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: McIvey soil—VIIe, Birchcreek soil—VIs, Hutchley soil—VIe, nonirrigated

Range site: McIvey soil—028BY026NV; Birchcreek soil—028BY046NV; Hutchley soil—028BY034NV; Inclusion 1—028BY015NV; Inclusion 2—none; Inclusion 3—028BY032NV; Inclusion 4—028BY034NV

570—Yody-Blimo-McConnel association

Map Unit Setting

Position on landscape: Fan piedmont remnants and beach plains

Composition

Major components:

- Yody gravelly sandy loam, 2 to 8 percent slopes—40 percent
- Blimo gravelly loam, 2 to 8 percent slopes—30 percent
- McConnel gravelly fine sandy loam, 2 to 8 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 2 to 8 percent slopes—10 percent
- Inclusion 2: Zerk gravelly loam, 0 to 4 percent slopes—5 percent

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,200 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,200 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.5 to 7.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the McConnel Soil

Classification: Xerollic Camborthids, sandy-skeletal, mixed, mesic

Position on landscape: Offshore bars on beach plains

Parent material: Mixed alluvium over lacustrine beach sediments

Slope range: 2 to 8 percent

Elevation: 6,200 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 3 inches
Texture: Gravelly fine sandy loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 11 inches
Texture: Sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 11 to 42 inches
Texture: Extremely gravelly coarse sand
Structure: Single grained
Consistence: Loose
Reaction: Moderately alkaline
Salinity: More than 2 mmhos per cm

Depth: 42 to 60 inches
Texture: Sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: More than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 4.0 to 4.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.32; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Beach plains

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Offshore bars on beach plains

Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Yody soil—IIIe, irrigated; Yody and Blimo soils—VIs, McConnel soil—VIIs, nonirrigated

Range site: Yody soil—028BY086NV; Blimo soil—028BY014NV; McConnel soil—028BY010NV; Inclusion 1—028BY010NV; Inclusion 2—028BY017NV

573—Yody-Palinor-Shabliss association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Yody gravelly sandy loam, 2 to 8 percent slopes—45 percent
- Palinor gravelly loam, 2 to 8 percent slopes—30 percent
- Shabliss gravelly loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Blimo gravelly loam, 2 to 4 percent slopes—7 percent
- Inclusion 2: Heist silt loam, 2 to 4 percent slopes—3 percent

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,900 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Gravelly sandy loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches
Texture: Gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 5.0 to 6.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Palnor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite
Slope range: 2 to 8 percent
Elevation: 6,000 to 6,900 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches
Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,900 feet

Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 5.5 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Yody soil—IIle, irrigated; Yody soil—VIs, Palino and Shabliss soils—VIIs, nonirrigated

Range site: Yody soil—028BY086NV; Palino soil—028BY011NV; Shabliss soil—028BY080NV; Inclusion 1—028BY014NV; Inclusion 2—028BY084NV

575—Yody-Broyles association

Map Unit Setting

Position on landscape: Fan piedmonts and fan skirts

Composition

Major components:

- Yody gravelly sandy loam, 2 to 4 percent slopes—50 percent
- Broyles very fine sandy loam, 2 to 4 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Palino gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 2: Tulase silt loam, 0 to 2 percent slopes—4 percent
- Inclusion 3: Broyles very fine sandy loam, 2 to 4 percent slopes—4 percent
- Inclusion 4: Linoyer very fine sandy loam, 0 to 2 percent slopes—3 percent

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Gravelly sandy loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 16 inches
Texture: Gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 16 to 38 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 38 to 60 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 5.0 to 6.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Broyles Soil

Classification: Duric Camborthids, coarse-loamy, mixed, mesic
Position on landscape: Fan skirts
Parent material: Thin loess mantle over mixed loamy alluvium

Slope range: 2 to 4 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 12 inches
Texture: Very fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 12 to 60 inches
Texture: Fine sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 6.0 to 7.5 inches
Water-supplying capacity: 5 to 7 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Low

Contrasting Inclusions**Inclusion 1**

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants on the upper part of the unit
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans adjacent to fluvial
Distinctive present vegetation: Wyoming big sagebrush,

winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 4

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Yody soil—IIIe, Broyles soil—Ile, irrigated; Yody soil—VIIs, Broyles soil—VIIc, nonirrigated

Range site: Yody soil—028BY086NV; Broyles soil—028BY075NV; Inclusion 1—028BY011NV; Inclusion 2—028BY045NV; Inclusion 3—028BY017NV; Inclusion 4—028BY013NV

578—Yody gravelly sandy loam, 2 to 4 percent slopes

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major component:

- Yody gravelly sandy loam, 2 to 4 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Camborthids very gravelly loam, 0 to 2 percent slopes—6 percent
- Inclusion 2: Palinoz gravelly loam, 0 to 2 percent slopes—4 percent
- Inclusion 3: Haploxerollic Durargids very gravelly loam, 2 to 4 percent slopes—3 percent
- Inclusion 4: Pyrat gravelly sandy loam, 2 to 4 percent slopes—2 percent

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Yody soil—IIIe, irrigated, VIs, nonirrigated

Range site: Yody soil—028BY086NV; Inclusion 1—028BY010NV; Inclusion 2—028BY011NV; Inclusion 3—028BY010NV; Inclusion 4—028BY010NV

580—Uwell-Kelk association

Map Unit Setting

Position on landscape: Inset fans

Composition

Major components:

- Uwell silt loam, 0 to 2 percent slopes—60 percent
- Kelk very fine sandy loam, 0 to 4 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Shabliss gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Xerollic Camborthids very gravelly loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Tulase silt loam, 0 to 4 percent slopes—5 percent

Characteristics of the Uwell Soil

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Broad inset fans

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,100 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 26 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Silty clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 9.0 to 13.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Kelk Soil

Classification: Durixerollic Camborthids, fine-silty, mixed, mesic

Position on landscape: Broad inset fans

Parent material: Loess, some volcanic ash, and mixed silty alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,100 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Very fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 4 to 32 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 8 mmhos per cm

Depth: 32 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Slightly hard, firm
Reaction: Strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 11.0 to 12.0 inches
Water-supplying capacity: 7 to 10 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xerollic Camborthids, loamy-skeletal, mixed, mesic
Position on landscape: Inset fans adjacent to stream channels

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Uwell soil—VIIs, Kelk soil—VIs, nonirrigated
Range site: Uwell soil—028BY045NV; Kelk soil—028BY045NV; Inclusion 1—028BY080NV; Inclusion 2—028BY010NV; Inclusion 3—028BY045NV

590—Raph-Katelana-Zimwala association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Raph loam, 0 to 2 percent slopes—40 percent
- Katelana silt loam, 0 to 2 percent slopes—30 percent
- Zimwala silt loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Heist silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Katelana silt loam, 0 to 2 percent slopes—5 percent

Characteristics of the Raph Soil

Classification: Typic Camborthids, fine-loamy, mixed, mesic
Position on landscape: Outer margins of lake plains
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 120 days

Typical Profile*Depth:* 0 to 4 inches*Texture:* Loam*Structure:* Platy*Consistence:* Hard, friable*Reaction:* Strongly alkaline*Salinity:* Less than 4 mmhos per cm*Depth:* 4 to 30 inches*Texture:* Loam*Structure:* Subangular blocky*Consistence:* Hard, friable*Reaction:* Strongly alkaline*Salinity:* Less than 4 mmhos per cm*Depth:* 30 to 42 inches*Texture:* Gravelly sandy loam*Structure:* Massive*Consistence:* Hard, friable*Reaction:* Strongly alkaline*Salinity:* Less than 4 mmhos per cm*Depth:* 42 to 60 inches*Texture:* Stratified fine sandy loam to very gravelly coarse sand*Structure:* Massive*Consistence:* Hard, friable*Reaction:* Strongly alkaline*Salinity:* Less than 4 mmhos per cm**Soil and Water Features***Depth to a seasonal high water table:* More than 60 inches*Frequency of flooding:* Rare*Permeability:* Moderate*Available water capacity:* 7.0 to 9.0 inches*Water-supplying capacity:* 6 to 8 inches*Runoff:* Slow*Hydrologic group:* B*Erosion factors (surface layer):* K value—.37; T value—5; wind erodibility group—5*Hazard of erosion:* By water—slight; by wind—slight*Shrink-swell potential:* Moderate*Corrosivity:* Steel—high; concrete—moderate*Potential for frost action:* Moderate**Characteristics of the Katelana Soil***Classification:* Typic Torriorthents, fine-silty, carbonatic, mesic*Position on landscape:* Lake plains*Parent material:* Alluvium derived from limestone over lacustrine sediments*Slope range:* 0 to 2 percent*Elevation:* 5,800 to 6,200 feet*Dominant present vegetation:* Shadscale, squirreltail**Climatic Data***Average annual precipitation:* About 7 inches*Average annual air temperature:* About 47 degrees F*Frost-free period:* About 115 days**Typical Profile***Depth:* 0 to 2 inches*Texture:* Silt loam*Structure:* Prismatic parting to platy*Consistence:* Slightly hard, friable*Reaction:* Strongly alkaline*Salinity:* 4 to 8 mmhos per cm*Depth:* 2 to 19 inches*Texture:* Silt loam*Structure:* Prismatic*Consistence:* Slightly hard, friable*Reaction:* Strongly alkaline*Salinity:* 4 to 8 mmhos per cm*Depth:* 19 to 32 inches*Texture:* Silt loam*Structure:* Subangular blocky*Consistence:* Soft, very friable*Reaction:* Strongly alkaline*Salinity:* More than 16 mmhos per cm*Depth:* 32 to 62 inches*Texture:* Silty clay loam*Structure:* Subangular blocky*Consistence:* Soft, very friable*Reaction:* Strongly alkaline*Salinity:* More than 16 mmhos per cm*Depth:* 62 to 75 inches*Texture:* Silty clay*Structure:* Subangular blocky*Consistence:* Soft, very friable*Reaction:* Moderately alkaline*Salinity:* More than 16 mmhos per cm**Soil and Water Features***Depth to a seasonal high water table:* More than 60 inches*Frequency of flooding:* None*Permeability:* Moderately slow*Available water capacity:* 13.0 to 16.0 inches*Water-supplying capacity:* 6 to 8 inches*Runoff:* Slow*Hydrologic group:* B*Erosion factors (surface layer):* K value—.37; T value—5; wind erodibility group—4L*Hazard of erosion:* By water—slight; by wind—slight

Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Zimwala Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Sickie saltbush, western wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 13 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm

Depth: 13 to 40 inches
Texture: Stratified silt loam to silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 40 to 60 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 10.5 to 12.0 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Fan skirts adjacent to lake plains
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Lake plains
Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Interpretive Groups

Capability classification: Raph soil—IIC, irrigated; Raph soil—VIIc, Katelana and Zimwala soils—VIIs, nonirrigated
Range site: Raph soil—028BY017NV; Katelana soil—028BY073NV; Zimwala soil—028BY047NV; Inclusion 1—028BY084NV; Inclusion 2—028BY074NV

602—Blimo-Nyak-Raph association

Map Unit Setting

Position on landscape: Basin floors

Composition

Major components:

- Blimo gravelly loam, 0 to 2 percent slopes—35 percent
 - Nyak fine sandy loam, 0 to 2 percent slopes—30 percent
 - Raph loam, 0 to 2 percent slopes—20 percent
- Contrasting inclusions:*
- Inclusion 1: Uwell silt loam, 0 to 2 percent slopes—5 percent
 - Inclusion 2: Heist silt loam, 0 to 2 percent slopes—5 percent
 - Inclusion 3: Pyrat gravelly sandy loam, 0 to 4 percent slopes—3 percent
 - Inclusion 4: Zimwala silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Beach plains
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,300 feet
Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches
Texture: Gravelly sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Very hard, firm
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 4.5 to 7.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Nyak Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,300 feet
Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 9 inches
Texture: Fine sandy loam
Structure: Platy
Consistence: Slightly hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 9 to 14 inches
Texture: Fine sandy loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 60 inches
Texture: Stratified fine sandy loam to silty clay loam
Structure: Platy
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: Rare
Permeability: Moderately slow
Available water capacity: 7.0 to 8.5 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.32; T value—5; wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Raph Soil

Classification: Typic Camborthids, fine-loamy, mixed, mesic
Position on landscape: Lake plains adjacent to beach plains
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,300 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F
Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches
Texture: Loam
Structure: Platy
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 4 to 30 inches
Texture: Loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 30 to 42 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 42 to 60 inches
Texture: Stratified fine sandy loam to very gravelly coarse sand
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: Rare
Permeability: Moderate
Available water capacity: 7.0 to 9.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic
Position on landscape: Outer margins of lake plains adjacent to fan skirts

Distinctive present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Fan skirts adjacent to lake plains and beach plains

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Beach plains
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Lake plains
Distinctive present vegetation: Sickie saltbush, western wheatgrass, Indian ricegrass

Interpretive Groups

Capability classification: Raph soil—IIc, irrigated; Blimo soil—VIs, Nyak soil—VIc, Raph soil—VIIc, nonirrigated

Range site: Blimo soil—028BY014NV; Nyak soil—028BY010NV; Raph soil—028BY017NV; Inclusion 1—028BY054NV; Inclusion 2—028BY084NV; Inclusion 3—028BY010NV; Inclusion 4—028BY047NV

603—Blimo-Uwell association

Map Unit Setting

Position on landscape: Basin floors

Composition

Major components:

- Blimo gravelly loam, 0 to 2 percent slopes—50 percent
- Uwell silt loam, 0 to 2 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Tulase silt loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Heist silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Zimwala silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 4: Pyrat gravelly sandy loam, 0 to 4 percent slopes—2 percent

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 21 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.5 to 7.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Uwell Soil

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Lake plains adjacent to beach plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 26 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Silty clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 9.0 to 13.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to beach plains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Lagoons on beach plains

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 3

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Distinctive present vegetation: Sickie saltbush, western wheatgrass, Indian ricegrass

Inclusion 4

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Offshore bars on beach plains

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Blimo soil—VIs, Uwell soil—VIIs, nonirrigated

Range site: Blimo soil—028BY014NV; Uwell soil—028BY054NV; Inclusion 1—028BY045NV; Inclusion 2—028BY084NV; Inclusion 3—028BY047NV; Inclusion 4—028BY010NV

605—Blimo-Heist-Tosser association

Map Unit Setting

Position on landscape: Beach plains

Composition

Major components:

- Blimo gravelly loam, 0 to 4 percent slopes—50 percent
- Heist silt loam, 0 to 4 percent slopes—20 percent
- Tosser loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Linoyer very fine sandy loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Kunzler silt loam, 0 to 2 percent slopes—5 percent

- Inclusion 3: Xerollic Durorthids gravelly loam, 0 to 2 percent slopes—5 percent

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,100 to 6,200 feet

Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.5 to 7.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,100 to 6,200 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tosser Soil

Classification: Xerollic Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Offshore bars on beach plains

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,100 to 6,200 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 8 inches

Texture: Loam

Structure: Platy

Consistence: Soft, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 24 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 24 to 60 inches

Texture: Extremely gravelly loamy coarse sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.28; T value—5;
wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Lagoons on beach plains
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Lagoons on beach plains
Distinctive present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Inclusion 3

Classification: Xerollic Durorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Offshore bars on beach plains
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Blimo soil—VIs, Heist soil—VIc, Tosser soil—VIIIs, nonirrigated
Range site: Blimo soil—028BY014NV; Heist soil—028BY084NV; Tosser soil—028BY016NV; Inclusion 1—028BY013NV; Inclusion 2—028BY056NV; Inclusion 3—028BY080NV

610—Broyles-Heist-Unsel association

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major components:

- Broyles very fine sandy loam, 2 to 4 percent slopes—45 percent
- Heist silt loam, 2 to 4 percent slopes—25 percent
- Unsel gravelly fine sandy loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Zerk gravelly loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Katelana silt loam, 0 to 2 percent slopes—5 percent

- Inclusion 3: Blimo gravelly loam, 2 to 4 percent slopes—3 percent
- Inclusion 4: Broyles very fine sandy loam, 0 to 4 percent slopes—2 percent

Characteristics of the Broyles Soil

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Thin loess mantle over mixed loamy alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 12 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 12 to 60 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.5 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5;
wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Unsel Soil

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Shadscale, galleta, Bailey greasewood, bud sagebrush

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 4 inches

Texture: Gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 14 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 22 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, brittle

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches

Texture: Very gravelly loamy sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 3.0 to 5.0 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.20; T value—3; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Offshore bars adjacent to fan skirts

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains adjacent to fan skirts

Distinctive present vegetation: Shadscale, squirreltail

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains adjacent to fan skirts

Distinctive present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Inclusion 4

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Beach plains adjacent to fan skirts

Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Broyles soil—Ile, Unsel soil—IIle, irrigated; Broyles and Unsel soils—VIIc, Heist soil—VIc, nonirrigated

Range site: Broyles soil—028BY075NV; Heist soil—028BY084NV; Unsel soil—029XY017NV; Inclusion 1—028BY075NV; Inclusion 2—028BY073NV; Inclusion 3—028BY014NV; Inclusion 4—028BY017NV

620—Unsel-Broyles association

Map Unit Setting

Position on landscape: Fan piedmonts and fan skirts

Composition

Major components:

- Unsel gravelly fine sandy loam, 2 to 8 percent slopes—70 percent
- Broyles very fine sandy loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Wintermute gravelly sandy loam, 2 to 8 percent slopes—8 percent

- Inclusion 2: Typic Torriorthents sandy loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Typic Calciorthids gravelly sandy loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Durixerollic Calciorthids gravelly loam, 2 to 8 percent slopes—1 percent

Characteristics of the Unsel Soil

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Shadscale, galleta, Bailey greasewood, bud sagebrush

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 4 inches

Texture: Gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 14 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 22 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, brittle

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches

Texture: Very gravelly loamy sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow
Available water capacity: 3.0 to 5.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.20; T value—3;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Characteristics of the Broyles Soil

Classification: Duric Camborthids, coarse-loamy, mixed, mesic
Position on landscape: Fan skirts
Parent material: Thin loess mantle over mixed loamy alluvium
Slope range: 2 to 4 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 40 percent
Depth: 0 to 12 inches
Texture: Very fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 12 to 60 inches
Texture: Fine sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid
Available water capacity: 6.0 to 7.5 inches
Water-supplying capacity: 5 to 7 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5;
 wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Shadscale, winterfat, Indian ricegrass, galleta

Inclusion 2

Classification: Typic Torriorthents, sandy-skeletal, mixed (calcareous), mesic
Position on landscape: Fan skirts
Distinctive present vegetation: Fourwing saltbush, winterfat, Indian ricegrass, galleta

Inclusion 3

Classification: Typic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Fan skirts adjacent to fluves
Distinctive present vegetation: Spiny hopsage, black sagebrush, Indian ricegrass

Inclusion 4

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Fan piedmont remnants adjacent to fluves
Distinctive present vegetation: Wyoming big sagebrush, spiny hopsage, Indian ricegrass

Interpretive Groups

Capability classification: Unsel soil—IIIc, Broyles soil—Ile, irrigated; Unsel and Broyles soils—VIIc, nonirrigated
Range site: Unsel soil—029XY017NV; Broyles soil—028BY017NV; Inclusion 1—029XY090NV; Inclusion 2—029XY012NV; Inclusion 3—028BY053NV; Inclusion 4—028BY052NV

621—Nyala-Breko-Unsel association

Map Unit Setting

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Nyala sandy loam, 0 to 2 percent slopes—50 percent
- Breko gravelly sandy loam, 0 to 4 percent slopes—25 percent
- Unsel gravelly fine sandy loam, 0 to 2 percent slopes—15 percent

Contrasting inclusion:

- Inclusion 1: Yody gravelly sandy loam, 0 to 4 percent slopes—10 percent

Characteristics of the Nyala Soil

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Shadscale, winterfat, Indian ricegrass, galleta

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 130 days

Typical Profile

Depth: 0 to 3 inches

Texture: Sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 12 inches

Texture: Sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 12 to 56 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 56 to 60 inches

Texture: Gravelly loamy sand

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.5 to 8.3 inches

Water-supplying capacity: 6 to 10 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the Breko Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 9 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 26 inches

Texture: Extremely gravelly sandy clay loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 2.5 to 4.5 inches
Water-supplying capacity: 5 to 6 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.24; T value—5;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Unsel Soil

Classification: Duric Haplargids, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Shadscale, galleta, Bailey
 greasewood, bud sagebrush

Climatic Data

Average annual precipitation: About 6 inches
Average annual air temperature: About 53 degrees F
Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 25 percent
Depth: 0 to 4 inches
Texture: Gravelly fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 14 inches
Texture: Gravelly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 22 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Very hard, brittle
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches
Texture: Very gravelly loamy sand
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 3.0 to 5.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.20; T value—3;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusion

Inclusion 1

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Nyala soil—IIIe, Unsel soil—IIIs, irrigated; Nyala and Breko soils—VIIs, Unsel soil—VIIc, nonirrigated
Range site: Nyala soil—029XY090NV; Breko soil—029XY006NV; Unsel soil—029XY017NV; Inclusion 1—028BY010NV

630—Molion-Haarvar association

Map Unit Setting

Position on landscape: Fan piedmonts and low hills

Composition

Major components:

- Molion very gravelly sandy loam, 4 to 15 percent slopes—40 percent
- Haarvar gravelly clay loam, 4 to 15 percent slopes—25 percent
- Haarvar gravelly clay loam, 15 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Nyala sandy loam, 4 to 15 percent slopes—10 percent
- Inclusion 2: Biken very gravelly fine sandy loam, 15 to 50 percent slopes—5 percent

Characteristics of the Molion Soil

Classification: Haploxerollic Durorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium and some loess

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 52 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 14 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 25 inches

Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.7 to 1.0 inch

Water-supplying capacity: 5 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.05; T value—1; wind erodibility group—5

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Less Sloping Haarvar Soil

Classification: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow

Position on landscape: North-facing, low side slopes of hills

Parent material: Residuum derived from shale and siltstone

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 2 inches

Texture: Gravelly clay loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 10 inches

Texture: Clay

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 inches

Texture: Weathered siltstone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 4 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Characteristics of the Moderately Steep Haarvar Soil

Classification: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow

Position on landscape: South-facing, low side slopes of hills

Parent material: Residuum derived from shale and siltstone

Slope range: 15 to 30 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 2 inches

Texture: Gravelly clay loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 10 inches

Texture: Clay

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 inches

Texture: Weathered siltstone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 4 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—1; wind erodibility group—5

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Spiny hopsage, black sagebrush, Indian ricegrass

Inclusion 2

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants that have a rock core

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Molion soil—IVe, irrigated; Molion soil and the less sloping Haarvar soil—VIIs, the moderately steep Haarvar soil—VIIe, nonirrigated

Range site: Molion soil—029XY008NV; the less sloping Haarvar soil—029XY008NV; the moderately steep Haarvar soil—029XY014NV; Inclusion 1—028BY053NV; Inclusion 2—028BY060NV

631—Roden-Haarvar association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Roden very gravelly clay loam, 8 to 30 percent slopes—50 percent
- Haarvar gravelly clay loam, 8 to 30 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Roden very gravelly clay loam, 15 to 50 percent slopes—6 percent
- Inclusion 2: Maderbak very gravelly clay loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Rock outcrop—3 percent
- Inclusion 4: Roden very gravelly clay loam, 8 to 30 percent slopes—1 percent

Characteristics of the Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: North-facing side slopes of hills

Parent material: Residuum and colluvium derived from shale and sandstone

Slope range: 8 to 30 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 2 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 11 inches

Texture: Fractured shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 0.5 inch to 2.0 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Haarvar Soil

Classification: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow

Position on landscape: South-facing side slopes of hills

Parent material: Residuum derived from shale and siltstone

Slope range: 8 to 30 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 2 inches

Texture: Gravelly clay loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 10 inches

Texture: Clay

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 inches

Texture: Weathered siltstone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 4 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—1; wind erodibility group—5

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Upper side slopes of hills

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Slightly concave side slopes of hills

Distinctive present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Inclusion 3

Position on landscape: Crests and side slopes of hills

Distinctive present vegetation: None

Inclusion 4

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Side slopes of hills

Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Interpretive Groups

Capability classification: Roden soil—VIIIs, Haarvar soil—VIIe, nonirrigated

Range site: Roden soil—028BY016NV; Haarvar soil—029XY014NV; Inclusion 1—028BY060NV; Inclusion 2—029XY006NV; Inclusion 3—none; Inclusion 4—028BY083NV

632—Roden-Haarvar association, steep**Map Unit Setting**

Position on landscape: Hills

Composition

Major components:

- Roden very gravelly clay loam, 30 to 50 percent slopes—60 percent
- Haarvar gravelly clay loam, 30 to 50 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Haarvar gravelly clay loam, 4 to 15 percent slopes—9 percent
- Inclusion 2: Rock outcrop—6 percent

Characteristics of the Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: North-facing side slopes of hills

Parent material: Residuum and colluvium derived from shale and sandstone

Slope range: 30 to 50 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 2 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 10 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 inches

Texture: Fractured shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Haarvar Soil

Classification: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow

Position on landscape: South-facing side slopes of hills

Parent material: Residuum derived from shale and siltstone

Slope range: 30 to 50 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 2 inches

Texture: Gravelly clay loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 18 inches

Texture: Clay

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 inches

Texture: Weathered siltstone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 4 to 6 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—1; wind erodibility group—5

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Side slopes of hills

Distinctive present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Inclusion 2

Position on landscape: Crests and side slopes of hills

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Roden soil—VIIIs, Haarvar soil—VIIe, nonirrigated

Range site: Roden soil—028BY016NV; Haarvar soil—029XY014NV; Inclusion 1—029XY008NV; Inclusion 2—none

633—Roden-Izar association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Roden very gravelly clay loam, 8 to 30 percent slopes—50 percent

- Izar very gravelly loam, 8 to 30 percent slopes—20 percent

- Roden very gravelly clay loam, eroded, 8 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Tulase silt loam, 2 to 4 percent slopes—7 percent

- Inclusion 2: Xerollic Haplargids very gravelly loam, 4 to 15 percent slopes—5 percent

- Inclusion 3: Linoyer very fine sandy loam, 2 to 4 percent slopes—2 percent

- Inclusion 4: Palinor gravelly loam, 2 to 8 percent slopes—1 percent

Characteristics of the Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Side slopes of hills

Parent material: Residuum and colluvium derived from shale and sandstone

Slope range: 8 to 30 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 2 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 11 inches

Texture: Fractured shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: None to 2.0 inches
Water-supplying capacity: 5 to 7 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Izar Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Crests and side slopes of hills
Parent material: Residuum and colluvium derived from tuffaceous sandstone
Slope range: 8 to 30 percent
Elevation: 6,200 to 7,000 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 30 percent

Depth: 0 to 3 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 inches
Texture: Fractured sandstone

Soil and Water Features

Depth to bedrock: 7 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: None to 2.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Eroded Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow
Position on landscape: Side slopes of hills
Parent material: Residuum and colluvium derived from shale and sandstone
Slope range: 8 to 30 percent
Elevation: 6,200 to 7,000 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 1 inch
Texture: Very gravelly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 8 inches
Texture: Very gravelly clay
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 inches
Texture: Fractured shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: None to 2.0 inches
Water-supplying capacity: 5 to 7 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Drainageways on hills
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Xerollic Haplargids, fine, montmorillonitic, mesic
Position on landscape: Lower, slightly concave side slopes of hills
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Drainageways on hills
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants adjacent to hills
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Roden and Izar soils—VIIIs, nonirrigated
Range site: Roden soil—028BY016NV; Izar soil—028BY016NV; the eroded Roden soil—028BY060NV;

Inclusion 1—028BY045NV; Inclusion 2—028BY010NV; Inclusion 3—028BY013NV; Inclusion 4—028BY011NV

640—Uwell-Katelana association

Map Unit Setting

Position on landscape: Fan skirts and basin floors

Composition

Major components:

- Uwell silt loam, 0 to 2 percent slopes—60 percent
- Katelana silt loam, 0 to 2 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Linoyer very fine sandy loam, 0 to 4 percent slopes—7 percent
- Inclusion 2: Yody gravelly sandy loam, 2 to 8 percent slopes—3 percent

Characteristics of the Uwell Soil

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic
Position on landscape: Alluvial flats
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 6,100 to 6,200 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 3 to 26 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 26 to 60 inches
Texture: Silty clay loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 9.0 to 13.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lower fan skirts

Parent material: Alluvium derived from limestone over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,200 feet

Dominant present vegetation: Shadscale, squirreltail

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Prismatic parting to platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 13.0 to 16.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants adjacent to fan skirts

Distinctive present vegetation: Wyoming big sagebrush, thurber needlegrass

Interpretive Groups

Capability classification: Uwell and Katelana soils—VIIIs, nonirrigated

Range site: Uwell soil—028BY054NV; Katelana soil—028BY073NV; Inclusion 1—028BY013NV; Inclusion 2—028BY086NV

642—Kunzler-Linoyer association**Map Unit Setting**

Position on landscape: Stream terraces and fan skirts

Composition

Major components:

- Kunzler loam, 0 to 2 percent slopes—50 percent
- Linoyer very fine sandy loam, 0 to 2 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Blimo gravelly loam, 0 to 2 percent slopes—4 percent
- Inclusion 2: Tosser loam, 0 to 2 percent slopes—3 percent
- Inclusion 3: Heist silt loam, 0 to 2 percent slopes—2 percent
- Inclusion 4: Zerk gravelly loam, 0 to 4 percent slopes—1 percent

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Stream terraces

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches

Texture: Loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, brittle

Reaction: Very strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.5 to 9.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to and cutting into stream terrace plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 11.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5;
wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Inclusion 2

Classification: Xerollic Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Linoyer soil—Ile, irrigated;

Kunzler soil—VIIc, Linoyer soil—VIe, nonirrigated

Range site: Kunzler soil—028BY056NV; Linoyer soil—028BY013NV; Inclusion 1—028BY014NV; Inclusion 2—028BY016NV; Inclusion 3—028BY084NV; Inclusion 4—028BY017NV

643—Kunzler-Bylo-Zimwala association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Kunzler loam, 0 to 2 percent slopes—40 percent
- Bylo silt loam, 0 to 2 percent slopes—30 percent

- Zimwala silt loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Tosser loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Blimo gravelly loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Heist silt loam, 0 to 2 percent slopes—5 percent

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Beach terraces

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,400 feet

Dominant present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches

Texture: Loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, brittle

Reaction: Very strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.5 to 9.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5;
 wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Characteristics of the Bylo Soil

Classification: Typic Camborthids, fine-silty, mixed, mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,400 feet
Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 4 to 60 inches
Texture: Silty clay loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 11.0 to 13.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5;
 wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Zimwala Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,400 feet
Dominant present vegetation: Sickie saltbush, western wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 13 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm

Depth: 13 to 40 inches
Texture: Stratified silt loam to silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: More than 16 mmhos per cm

Depth: 40 to 60 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 10.5 to 12.0 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.43; T value—5;
 wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Offshore bars adjacent to lake plains

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains adjacent to lake plains

Distinctive present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains adjacent to lake plains

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Bylo soil—Ilc, irrigated; Kunzler soil—VIIc, Bylo soil—VIc, Zimwala soil—VIIs, nonirrigated

Range site: Kunzler soil—028BY056NV; Bylo soil—028BY013NV; Zimwala soil—028BY047NV; Inclusion 1—028BY016NV; Inclusion 2—028BY014NV; Inclusion 3—028BY084NV

645—Kunzler-Blimo-Uwell association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Kunzler loam, 0 to 2 percent slopes—40 percent
- Blimo gravelly loam, 0 to 2 percent slopes—30 percent
- Uwell silt loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Bylo silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Zimwala silt loam, 0 to 2 percent slopes—5 percent

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Beach terraces

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches

Texture: Loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, brittle

Reaction: Very strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.5 to 9.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains adjacent to lake plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches
Texture: Gravelly sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Very hard, firm
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 4.5 to 7.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Uwell Soil

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 6,100 to 6,300 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 3 to 26 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 26 to 60 inches
Texture: Silty clay loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 9.0 to 13.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Typic Camborthids, fine-silty, mixed, mesic
Position on landscape: Lake plains
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Lake plains
Distinctive present vegetation: Sickie saltbush, Indian ricegrass, western wheatgrass

Interpretive Groups

Capability classification: Kunzler soil—VIIc, Blimo soil—VIs, Uwell soil—VIIs, nonirrigated

Range site: Kunzler soil—028BY056NV; Blimo soil—028BY014NV; Uwell soil—028BY054NV; Inclusion 1—028BY013NV; Inclusion 2—028BY065NV

650—Eaglepass-Kyler-Rock outcrop association

Map Unit Setting

Position on landscape: Hills and mountains

Composition

Major components:

- Eaglepass extremely stony loam, 30 to 75 percent slopes—35 percent
- Kyler extremely cobbly loam, 15 to 50 percent slopes—30 percent
- Rock outcrop—25 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 4 to 15 percent slopes—5 percent
- Inclusion 2: Zimbob very gravelly loam, 15 to 50 percent slopes—3 percent
- Inclusion 3: Durorthidic Xeric Torriorthents silt loam, 2 to 8 percent slopes—2 percent

Characteristics of the Eaglepass Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests and side slopes of hills and mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 6,200 to 7,200 feet

Dominant present vegetation: Littleleaf mountainmahogany, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 15 percent; pebbles, 40 percent

Depth: 0 to 1 inch

Texture: Extremely stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 4 inches

Texture: Extremely stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 4 to 6 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 4 to 5 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Kyler Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests and side slopes of hills and mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,200 to 7,200 feet

Dominant present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 30 percent; pebbles, 40 percent

Depth: 0 to 3 inches

Texture: Extremely cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 4 to 7 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of mountains and hills

Kind of rock: Limestone and dolomite

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Drainageways on hills and mountains

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests and side slopes of hills and mountains

Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Drainageways on hills and mountains

Distinctive present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Interpretive Groups

Capability classification: Eaglepass and Kyler soils—VIIIs, nonirrigated; Rock outcrop—VIIIIs

Range site: Eaglepass soil—029XY040NV; Kyler soil—029XY014NV; Rock outcrop—none; Inclusion 1—028BY011NV; Inclusion 2—028BY059NV; Inclusion 3—029XY008NV

660—Stewval-Rock outcrop complex

Map Unit Setting

Position on landscape: Hills and mountains

Composition

Major components:

- Stewval very stony fine sandy loam, 8 to 50 percent slopes—70 percent

- Rock outcrop—15 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Haplargids very gravelly loam, 30 to 50 percent slopes—7 percent
- Inclusion 2: Xerollic Haplargids very gravelly loam, 8 to 30 percent slopes—5 percent
- Inclusion 3: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Atlow very gravelly loam, 8 to 30 percent slopes—1 percent

Characteristics of the Stewval Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Crests and side slopes of hills and mountains

Parent material: Residuum and colluvium derived from andesite

Slope range: 8 to 50 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 51 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 30 percent; pebbles, 35 percent

Depth: 0 to 2 inches
Texture: Very stony fine sandy loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 10 inches
Texture: Very gravelly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 4 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 4 to 6 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of hills and mountains
Kind of rock: Andesite

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic
Position on landscape: South- and west-facing side slopes of hills and mountains
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic
Position on landscape: North-facing side slopes of hills and mountains
Distinctive present vegetation: Shadscale, Bailey greasewood, galleta, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Drainageways on hills and mountains
Distinctive present vegetation: Basin big sagebrush, alkali sacaton, rubber rabbitbrush, basin wildrye

Inclusion 4

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic
Position on landscape: Crests and side slopes of hills and mountains
Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Interpretive Groups

Capability classification: Stewval soil—VIIIs, nonirrigated; Rock outcrop—VIIIIs
Range site: Stewval soil—029XY014NV; Rock outcrop—none; Inclusion 1—028BY010NV; Inclusion 2—029XY022NV; Inclusion 3—029XY009NV; Inclusion 4—028BY089NV

670—Cavehill-Grink-Rock outcrop association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Cavehill very gravelly silt loam, 15 to 50 percent slopes—45 percent
- Grink very stony loam, 15 to 50 percent slopes—30 percent
- Rock outcrop—10 percent

Contrasting inclusions:

- Inclusion 1: Typic Calcixerolls gravelly silt loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Hardol very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Wardbay very gravelly loam, 15 to 50 percent slopes—3 percent
- Inclusion 4: Halacan very gravelly loam, 15 to 50 percent slopes—2 percent

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: Side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,200 to 8,200 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Grink Soil

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,200 to 8,200 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 2 percent; pebbles, 25 percent

Depth: 0 to 7 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 to 19 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 3.0 inches

Water-supplying capacity: 10 to 12.5 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of mountains

Kind of rock: Limestone and dolomite

Contrasting Inclusions

Inclusion 1

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North- and east-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Inclusion 2

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, needlegrass

Inclusion 3

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Cryic Lithic Rendols, loamy-skeletal, carbonatic

Position on landscape: Crests and convex side slopes of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Cavehill and Grink soils—VIIIs, nonirrigated; Rock outcrop—VIIIIs

Range site: Cavehill soil—028BY062NV; Grink soil—028BY043NV; Rock outcrop—none; Inclusion 1—028BY058NV; Inclusion 2—028BY085NV; Inclusion 3—028BY070NV; Inclusion 4—028BY048NV

680—Genaw-Puett-Abgese association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Genaw silt loam, 2 to 8 percent slopes—45 percent
- Puett gravelly loam, 8 to 30 percent slopes—25 percent
- Abgese sandy loam, 2 to 4 percent slopes—20 percent

Contrasting inclusion:

- Inclusion 1: Palinor gravelly loam, 2 to 8 percent slopes—10 percent

Characteristics of the Genaw Soil

Classification: Xerollic Haplargids, loamy, mixed, mesic, shallow

Position on landscape: Convex side slopes of hills

Parent material: Loess-mantled residuum derived from tuffaceous sediments

Slope range: 2 to 8 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 10 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 16 inches

Texture: Calcareous siltstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 3.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.49; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Puett Soil

Classification: Xeric Torriorthents, loamy, mixed (calcareous), mesic, shallow
Position on landscape: Convex summits and side slopes of hills
Parent material: Residuum derived from tuffaceous sediments
Slope range: 8 to 30 percent
Elevation: 6,100 to 6,300 feet
Dominant present vegetation: Utah juniper, Wyoming big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 5 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 5 to 14 inches
Texture: Sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 inches
Texture: Tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 5 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Abgese Soil

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic
Position on landscape: Slightly concave summits and side slopes of hills
Parent material: Colluvium derived from tuffaceous sedimentary rocks
Slope range: 2 to 4 percent
Elevation: 6,100 to 6,300 feet
Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 22 inches
Texture: Gravelly sandy clay loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 22 to 43 inches
Texture: Very gravelly sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 43 to 60 inches
Texture: Very gravelly loamy sand
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 6.0 to 7.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium

Hydrologic group: B
Erosion factors (surface layer): K value—.17; T value—5;
 wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusion

Inclusion 1

Classification: Xerollic Durorthids, loamy-skeletal,
 carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants adjacent
 to hills
Distinctive present vegetation: Black sagebrush, Indian
 ricegrass, needleandthread

Interpretive Groups

Capability classification: Genaw soil—VIIIs, Puett soil—
 VIIe, Abgese soil—VIc, nonirrigated
Range site: Genaw soil—028BY010NV; Puett soil—
 025XY059NV; Abgese soil—028BY010NV; Inclusion
 1—028BY011NV

690—Devilsgait-Cassiro association

Map Unit Setting

Position on landscape: Axial-stream flood plains and fan
 piedmont remnants

Composition

Major components:

- Devilsgait silt loam, 0 to 2 percent slopes—65 percent
- Cassiro stony loam, 2 to 4 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Typic Haplaquolls silty clay loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Cumulic Haplaquolls silt loam, 2 to 4 percent slopes—4 percent
- Inclusion 3: Amelar very gravelly loam, 2 to 8 percent slopes—1 percent

Characteristics of the Devilsgait Soil

Classification: Cumulic Haplaquolls, fine-silty, mixed
 (calcareous), mesic
Position on landscape: Axial-stream flood plains adjacent
 to areas of stream channel entrenchment
Parent material: Mixed silty alluvium and some loess and
 ash
Slope range: 0 to 2 percent
Elevation: 6,400 to 6,500 feet

Dominant present vegetation: Mountain big sagebrush,
 basin wildrye

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 9 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 9 to 46 inches
Texture: Stratified silt loam to silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 46 to 60 inches
Texture: Stratified loamy fine sand to silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 48 to 72 inches
Frequency of flooding: Rare
Permeability: Moderately slow
Available water capacity: 9.5 to 11.5 inches
Water-supplying capacity: 9 to 11 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5;
 wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: High

Characteristics of the Cassiro Soil

Classification: Aridic Argixerolls, clayey-skeletal,
 montmorillonitic, mesic
Position on landscape: Fan piedmont remnants adjacent
 to axial-stream flood plains
Parent material: Mixed alluvium
Slope range: 2 to 4 percent
Elevation: 6,400 to 6,500 feet
Dominant present vegetation: Mountain big sagebrush,
 bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 10 percent

Depth: 0 to 5 inches

Texture: Stony loam

Structure: Platy

Consistence: Soft, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 60 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 3.5 to 4.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Contrasting Inclusions**Inclusion 1**

Classification: Typic Haplaquolls, fine-loamy, mixed, mesic

Position on landscape: Axial-stream flood plains

Distinctive present vegetation: Tufted hairgrass, sedge

Inclusion 2

Classification: Cumulic Haplaquolls, loamy-skeletal, mixed, frigid

Position on landscape: Axial-stream flood plains

Distinctive present vegetation: Nevada bluegrass, alpine timothy

Inclusion 3

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave areas on fan piedmont remnants

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Devilsgait soil—IIIc, irrigated;

Devilsgait soil—VIc, Cassiro soil—VIIc, nonirrigated

Range site: Devilsgait soil—028BY024NV; Cassiro soil—028BY030NV; Inclusion 1—028BY022NV; Inclusion

2—028BY095NV; Inclusion 3—028BY088NV

710—Raph loam, 0 to 2 percent slopes**Map Unit Setting**

Position on landscape: Fan skirts

Composition

Major component:

- Raph loam, 0 to 2 percent slopes—90 percent

Contrasting inclusions:

- Inclusion 1: Linoyer very fine sandy loam, 0 to 2 percent slopes—6 percent
- Inclusion 2: McConnel gravelly fine sandy loam, 0 to 2 percent slopes—4 percent

Characteristics of the Raph Soil

Classification: Typic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,000 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Loam

Structure: Platy

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 30 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 30 to 42 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 42 to 60 inches

Texture: Stratified fine sandy loam to very gravelly coarse sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: Rare

Permeability: Moderately slow

Available water capacity: 7.0 to 9.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Xerollic Camborthids, sandy-skeletal, mixed, mesic

Position on landscape: Fan skirts adjacent to fluvial

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Raph soil—Ilc, irrigated, VIIc, nonirrigated

Range site: Raph soil—028BY017NV; Inclusion 1—028BY013NV; Inclusion 2—028BY010NV

730—Zimwala-Uwell-Zimwala, moist association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Zimwala silt loam, 0 to 2 percent slopes—50 percent
- Uwell silt loam, 0 to 2 percent slopes—20 percent
- Zimwala silt loam, moist, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: McConnel gravelly fine sandy loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Uwell silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Sheffit silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 4: Katelana silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Zimwala Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Sickle saltbush, western wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 13 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 13 to 40 inches

Texture: Stratified silt loam to silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 40 to 60 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow over very slow

Available water capacity: 10.5 to 12.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Characteristics of the Uwell Soil

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Outer margins of lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 26 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Silty clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 9.0 to 13.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Moist Zimwala Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 13 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 13 to 40 inches

Texture: Stratified silt loam to silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 40 to 60 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow over very slow
Available water capacity: 10.5 to 12.0 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Camborthids, sandy-skeletal, mixed, mesic
Position on landscape: Offshore bars on lake plains
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic
Position on landscape: Lake plains
Distinctive present vegetation: Winterfat, thickspike wheatgrass, western wheatgrass

Inclusion 3

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains
Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 4

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic
Position on landscape: Lake plains
Distinctive present vegetation: Black greasewood, shadscale, bottlebrush squirreltail

Interpretive Groups

Capability classification: Zimwala and Uwell soils—VIIIs, nonirrigated
Range site: Zimwala soil—028BY047NV; Uwell soil—028BY054NV; the moist Zimwala soil—028BY013NV; Inclusion 1—028BY010NV; Inclusion 2—

028BY071NV; Inclusion 3—028BY028NV; Inclusion 4—028BY074NV

731—Zimwala-Uwell association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Zimwala silt loam, 0 to 2 percent slopes—45 percent
- Uwell silt loam, 0 to 2 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Camborthids very gravelly loam, 0 to 2 percent slopes—8 percent
- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 0 to 8 percent slopes—4 percent
- Inclusion 3: Durorthidic Xeric Torriorthents silt loam, 0 to 2 percent slopes—3 percent

Characteristics of the Zimwala Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 13 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 13 to 40 inches

Texture: Stratified silt loam to silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 40 to 60 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow over very slow
Available water capacity: 10.5 to 12.0 inches
Water-supplying capacity: 8 to 11 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Low

Characteristics of the Uwell Soil

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic
Position on landscape: Lake plains
Parent material: Mixed alluvium over lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 6,100 to 6,300 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 3 to 26 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 26 to 60 inches
Texture: Silty clay loam
Structure: Prismatic
Consistence: Slightly hard, friable

Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 9.0 to 13.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Camborthids, coarse-loamy, mixed, mesic
Position on landscape: Fan skirts adjacent to lake plains
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Beach plains adjacent to lake plains
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic
Position on landscape: Lake plains
Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Zimwala and Uwell soils—VIIIs, nonirrigated
Range site: Zimwala soil—028BY013NV; Uwell soil—028BY054NV; Inclusion 1—028BY010NV; Inclusion 2—028BY010NV; Inclusion 3—028BY028NV

740—Orupa-Uwell association

Map Unit Setting

Position on landscape: Basin floors

Composition

Major components:

- Orupa clay loam, 2 to 8 percent slopes—50 percent
- Uwell silt loam, 0 to 2 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Sheffit silt loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Aquic Calciorthids silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Linoyer very fine sandy loam, 0 to 2 percent slopes—5 percent

Characteristics of the Orupa Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Parna dunes on lake plains

Parent material: Windblown clay

Slope range: 2 to 8 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Winterfat, thickspike wheatgrass, western wheatgrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Clay loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 60 inches

Texture: Clay loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 8.0 to 10.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Uwell Soil

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,100 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 26 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Silty clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 9.0 to 13.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Aquic Calciorthids, fine-silty, mixed, mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, basin wildrye, alkali sacaton

Inclusion 3

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to lake plains

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Orupa soil—IIIe, irrigated; Orupa soil—VIc, Uwell soil—VIIs, nonirrigated

Range site: Orupa soil—028BY071NV; Uwell soil—028BY054NV; Inclusion 1—028BY028NV; Inclusion 2—028BY004NV; Inclusion 3—028BY013NV

741—Orupa association

Map Unit Setting

Position on landscape: Parna dunes

Composition

Major components:

- Orupa clay loam, 0 to 2 percent slopes—55 percent
- Orupa clay loam, 2 to 4 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents clay loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Typic Torriorthents silty clay loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Typic Camborthids silt loam, 0 to 2 percent slopes—5 percent

Characteristics of the Nearly Level Orupa Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Parna dunes

Parent material: Windblown clay

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,600 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Clay loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 60 inches

Texture: Clay loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 8.0 to 10.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Gently Sloping Orupa Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Parna dunes

Parent material: Windblown clay

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,600 feet

Dominant present vegetation: Big sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile*Depth:* 0 to 4 inches*Texture:* Clay loam*Structure:* Platy*Consistence:* Soft, very friable*Reaction:* Strongly alkaline*Salinity:* Less than 4 mmhos per cm*Depth:* 4 to 60 inches*Texture:* Clay loam*Structure:* Granular*Consistence:* Soft, very friable*Reaction:* Strongly alkaline*Salinity:* Less than 8 mmhos per cm**Soil and Water Features***Depth to a seasonal high water table:* More than 60 inches*Frequency of flooding:* None*Permeability:* Moderate*Available water capacity:* 8.0 to 10.0 inches*Water-supplying capacity:* 8 to 10 inches*Runoff:* Slow*Hydrologic group:* B*Erosion factors (surface layer):* K value—.43; T value—5; wind erodibility group—4L*Hazard of erosion:* By water—slight; by wind—slight*Shrink-swell potential:* High*Corrosivity:* Steel—high; concrete—high*Potential for frost action:* Moderate**Contrasting Inclusions****Inclusion 1***Classification:* Xeric Torriorthents, fine-loamy, mixed (calcareous), mesic*Position on landscape:* Parna dunes*Distinctive present vegetation:* Winterfat, thickspike wheatgrass, western wheatgrass**Inclusion 2***Classification:* Typic Torriorthents, fine, montmorillonitic (calcareous), mesic*Position on landscape:* Parna dunes*Distinctive present vegetation:* Wyoming big sagebrush, bottlebrush squirreltail, bluegrass**Inclusion 3***Classification:* Typic Camborthids, fine-silty, mixed, mesic*Position on landscape:* Lake plains adjacent to parna dunes*Distinctive present vegetation:* Black greasewood, shadscale, bottlebrush squirreltail**Interpretive Groups***Capability classification:* The nearly level Orupa soil—Ilc,

the gently sloping Orupa soil—Ile, irrigated; Orupa soils—Vlc, nonirrigated

Range site: The nearly level Orupa soil—028BY054NV; the gently sloping Orupa soil—028BY005NV; Inclusion 1—028BY071NV; Inclusion 2—028BY056NV; Inclusion 3—028BY074NV**750—Upatad-Atlow association****Map Unit Setting***Position on landscape:* Mountains**Composition***Major components:*

- Upatad very gravelly silt loam, 15 to 50 percent slopes—40 percent
- Upatad very gravelly silt loam, eroded, 15 to 50 percent slopes—30 percent
- Atlow very gravelly loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 4 to 15 percent slopes—5 percent
- Inclusion 2: Rock outcrop—4 percent
- Inclusion 3: Durixerollic Calciorthids gravelly loam, 15 to 30 percent slopes—1 percent

Characteristics of the Upatad Soil*Classification:* Lithic Argixerolls, loamy-skeletal, mixed, mesic*Position on landscape:* Side slopes of mountains*Parent material:* Residuum and colluvium derived from andesite*Slope range:* 15 to 50 percent*Elevation:* 6,800 to 7,500 feet*Dominant present vegetation:* Black sagebrush, bluebunch wheatgrass, Thurber needlegrass**Climatic Data***Average annual precipitation:* About 14 inches*Average annual air temperature:* About 47 degrees F*Frost-free period:* About 110 days**Typical Profile***Surface cover:* Cobbles, 10 percent; pebbles, 40 percent*Depth:* 0 to 3 inches*Texture:* Very gravelly silt loam*Structure:* Subangular blocky*Consistence:* Slightly hard, very friable*Reaction:* Mildly alkaline*Salinity:* Less than 2 mmhos per cm

Depth: 3 to 15 inches
Texture: Very gravelly silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.4 to 2.1 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Eroded Upatad Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Side slopes of mountains
Parent material: Residuum and colluvium derived from andesite
Slope range: 15 to 50 percent
Elevation: 6,800 to 7,500 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 40 percent
Depth: 0 to 1 inch
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm
Depth: 1 to 14 inches
Texture: Very gravelly silty clay loam

Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.4 to 2.1 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic
Position on landscape: South-facing side slopes of mountains
Parent material: Residuum derived from andesite
Slope range: 15 to 50 percent
Elevation: 6,800 to 7,500 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent
Depth: 0 to 2 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 2 to 16 inches
Texture: Very gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Drainageways in the mountains
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Position on landscape: Crests and side slopes of mountains
Distinctive present vegetation: None

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: Lower, concave side slopes of mountains
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Upatad and Atlow soils—VIIs, nonirrigated
Range site: Upatad soil—028BY093NV; the eroded Upatad soil—028BY060NV; Atlow soil—028BY089NV; Inclusion 1—028BY010NV; Inclusion 2—none; Inclusion 3—028BY010NV

751—Upatad-Pookaloo association

Map Unit Setting

Position on landscape: Hills and mountains

Composition

Major components:

- Upatad very gravelly silt loam, 8 to 30 percent slopes—50 percent
- Pookaloo very gravelly loam, 8 to 30 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Haplargids very gravelly loam, 8 to 30 percent slopes—6 percent
- Inclusion 2: Lithic Xeric Torriorthents very gravelly loam, 8 to 30 percent slopes—5 percent
- Inclusion 3: Tulse silt loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Atlow very gravelly loam, 8 to 30 percent slopes—2 percent

Characteristics of the Upatad Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of hills

Parent material: Residuum and colluvium derived from andesite

Slope range: 8 to 30 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 40 percent

Depth: 0 to 3 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very gravelly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.4 to 2.1 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: Side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 8 to 30 percent
Elevation: 6,800 to 7,500 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent
Depth: 0 to 4 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 4 to 19 inches
Texture: Very gravelly silt loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 2.5 inches
Water-supplying capacity: 10 to 13 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic
Position on landscape: Lower side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Lower side slopes of mountains
Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Narrow drainageways on mountains on the lower part of the unit
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic
Position on landscape: Lower side slopes of mountains
Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Interpretive Groups

Capability classification: Upatad and Pookaloo soils—VIIIs, nonirrigated
Range site: Upatad soil—028BY093NV; Pookaloo soil—028BY060NV; Inclusion 1—028BY079NV; Inclusion

2—028BY083NV; Inclusion 3—028BY045NV;
Inclusion 4—028BY089NV

752—Upatad-Atlow-Pioche association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Upatad very gravelly silt loam, 8 to 30 percent slopes—35 percent
- Atlow very gravelly loam, 8 to 30 percent slopes—30 percent
- Pioche extremely stony loam, 15 to 50 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Aridic Argixerolls gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Lithic Argixerolls very gravelly loam, 15 to 50 percent slopes—3 percent
- Inclusion 3: Rock outcrop—2 percent

Characteristics of the Upatad Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Upper side slopes of hills

Parent material: Residuum and colluvium derived from andesite

Slope range: 8 to 30 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 40 percent

Depth: 0 to 3 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very gravelly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.4 to 2.1 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Lower side slopes of hills

Parent material: Residuum derived from andesite

Slope range: 8 to 30 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 16 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: North-facing side slopes of hills

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Extremely stony loam

Structure: Angular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Aridic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Narrow drainageways on hills

Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 2

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of hills adjacent to areas of rock outcrop

Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Position on landscape: Crests and side slopes of hills

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Upatad, Atlow, and Pioche soils—VIIIs, nonirrigated

Range site: Upatad soil—028BY093NV; Atlow soil—028BY089NV; Pioche soil—028BY062NV; Inclusion 1—028BY007NV; Inclusion 2—028BY039NV; Inclusion 3—none

753—Upatad-Cropper-Atlow association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Upatad very gravelly silt loam, 15 to 50 percent slopes—40 percent
- Cropper very cobbly loam, 15 to 50 percent slopes—30 percent
- Atlow very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—5 percent
- Inclusion 2: Segura very cobbly loam, 15 to 50 percent slopes—4 percent
- Inclusion 3: Xerollic Haplargids very gravelly loam, 4 to 15 percent slopes—4 percent
- Inclusion 4: Tulase silt loam, 2 to 8 percent slopes—2 percent

Characteristics of the Upatad Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Upper side slopes of mountains

Parent material: Residuum and colluvium derived from andesite

Slope range: 15 to 50 percent

Elevation: 7,100 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 40 percent

Depth: 0 to 3 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very gravelly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.4 to 2.1 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,100 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Atlow Soil

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Lower side slopes of mountains

Parent material: Residuum derived from andesite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,100 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 20 percent; pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 16 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Volcanic flow rock

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Slightly concave, north-facing side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Slightly concave side slopes of mountains on the lower part of the unit

Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Upatad, Cropper, and Atlow soils—VIIIs, nonirrigated

Range site: Upatad soil—028BY093NV; Cropper soil—028BY058NV; Atlow soil—028BY089NV; Inclusion 1—none; Inclusion 2—028BY087NV; Inclusion 3—028BY089NV; Inclusion 4—028BY045NV

760—Segura-Upatad-Cropper association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Segura very cobbly loam, 15 to 50 percent slopes—45 percent
- Upatad very gravelly silt loam, 15 to 50 percent slopes—25 percent
- Cropper very cobbly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Aridic Argixerolls gravelly loam, 15 to 50 percent slopes—7 percent
- Inclusion 2: Rock outcrop—5 percent
- Inclusion 3: Rubble land, 15 to 50 percent slopes—3 percent

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Sandy clay loam

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Upatad Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 40 percent

Depth: 0 to 3 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very gravelly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.4 to 2.1 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, curleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Concave side slopes of mountains on the lower part of the unit

Distinctive present vegetation: Wyoming big sagebrush, thurber needlegrass

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Position on landscape: Side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Segura, Upatad, and Cropper soils—VIIIs, nonirrigated

Range site: Segura soil—028BY087NV; Upatad soil—028BY093NV; Cropper soil—028BY058NV; Inclusion 1—028BY086NV; Inclusion 2—none; Inclusion 3—none

762—Segura-Eoj-Cassiro association

Map Unit Setting

Position on landscape: Hills and mountains

Composition

Major components:

- Segura very cobbly loam, 8 to 30 percent slopes—35 percent
- Eoj very stony loam, 8 to 30 percent slopes—30 percent
- Cassiro stony loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Pioche very cobbly loam, 8 to 30 percent slopes—10 percent
- Inclusion 2: Cassiro stony loam, 4 to 15 percent slopes—5 percent

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite, quartzite, and conglomerate

Slope range: 8 to 30 percent

Elevation: 7,200 to 7,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Sandy clay loam

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Quartzite

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Eoj Soil

Classification: Typic Palexerolls, fine, montmorillonitic, frigid

Position on landscape: Slightly concave side slopes of hills

Parent material: Colluvium derived from quartzite, conglomerate, and limestone

Slope range: 8 to 30 percent

Elevation: 7,200 to 7,500 feet

Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 80 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 8 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 60 inches

Texture: Cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 10.5 to 15 inches

Runoff: Medium

Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1;
 wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Cassiro Soil

Classification: Aridic Argixerolls, clayey-skeletal,
 montmorillonitic, mesic
Position on landscape: Concave side slopes of hills
Parent material: Colluvium derived from quartzite and
 conglomerate
Slope range: 4 to 15 percent
Elevation: 7,200 to 7,500 feet
Dominant present vegetation: Big sagebrush, Thurber
 needlegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles,
 10 percent; pebbles, 10 percent

Depth: 0 to 5 inches
Texture: Stony loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 5 to 60 inches
Texture: Very gravelly clay
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60
 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 3.5 to 4.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.17; T value—5;
 wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Lithic Argixerolls, clayey-skeletal,
 montmorillonitic, mesic
Position on landscape: North-facing side slopes of hills
Distinctive present vegetation: Singleleaf pinyon, Utah
 juniper, mountain big sagebrush, bluebunch
 wheatgrass

Inclusion 2

Classification: Aridic Argixerolls, clayey-skeletal,
 montmorillonitic, mesic
Position on landscape: Intermountain basin areas
Distinctive present vegetation: Mountain big sagebrush,
 bluebunch wheatgrass

Interpretive Groups

Capability classification: Segura, Eoj, and Cassiro soils—
 VIIs, nonirrigated
Range site: Segura soil—028BY087NV; Eoj soil—
 028BY037NV; Cassiro soil—028BY007NV; Inclusion
 1—028BY062NV; Inclusion 2—028BY030NV

763—Segura-Pioche-Mclvey association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Segura very cobbly loam, 8 to 30 percent slopes—35 percent
 - Pioche extremely stony loam, 15 to 50 percent slopes—30 percent
 - Mclvey gravelly loam, 4 to 15 percent slopes—20 percent
- Contrasting inclusions:*
- Inclusion 1: Upatad very gravelly silt loam, 15 to 50 percent slopes—5 percent
 - Inclusion 2: Mclvey very gravelly loam, 15 to 50 percent slopes—5 percent
 - Inclusion 3: Lithic Xeric Torriorthents very gravelly loam, 15 to 50 percent slopes—3 percent
 - Inclusion 4: Rock outcrop—2 percent

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid
Position on landscape: Summits of mountains
Parent material: Residuum and colluvium derived from
 andesite, quartzite, and conglomerate
Slope range: 8 to 30 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Sandy clay loam

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Quartzite

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pioche Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 25 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Extremely stony loam

Structure: Angular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 15 inches

Texture: Very cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 6 to 15 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Low

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from andesite and conglomerate

Slope range: 4 to 15 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 5 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 5.0 to 7.5 inches

Water-supplying capacity: 10 to 18 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 2

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Segura and Pioche soils—VIIIs, McIvey soil—VIc, nonirrigated

Range site: Segura soil—028BY087NV; Pioche soil—028BY062NV; McIvey soil—028BY030NV; Inclusion 1—028BY093NV; Inclusion 2—028BY015NV; Inclusion 3—028BY062NV; Inclusion 4—none

770—Cropper-Birchcreek-Segura association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Cropper very cobbly loam, 15 to 50 percent slopes—40 percent
- Birchcreek very cobbly loam, 15 to 50 percent slopes—25 percent
- Segura very cobbly loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: McIvey very gravelly loam, 15 to 50 percent slopes—10 percent
- Inclusion 2: Rock outcrop—4 percent
- Inclusion 3: Hyzen extremely stony loam, 15 to 50 percent slopes—1 percent

Characteristics of the Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Birchcreek Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Slightly concave side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 10 percent; pebbles, 20 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches

Texture: Very cobbly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 10 to 28 inches

Texture: Very cobbly clay

Structure: Prismatic

Consistence: Hard, firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 28 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.9 to 2.7 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2;
wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Slightly convex side slopes of mountains

Parent material: Residuum and colluvium derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Depth: 3 to 14 inches

Texture: Sandy clay loam

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Depth: 14 inches

Texture: Quartzite

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1;
wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Cropper and Segura soils—VIIIs, Birchcreek soil—VIs, nonirrigated

Range site: Cropper soil—028BY058NV; Birchcreek soil—028BY046NV; Segura soil—028BY087NV; Inclusion 1—028BY015NV; Inclusion 2—none; Inclusion 3—028BY060NV

774—Cropper-Rubble land association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Cropper very cobbly loam, 15 to 50 percent slopes—60 percent
- Cropper very cobbly loam, cool, 15 to 50 percent slopes—15 percent
- Rubble land, 15 to 50 percent slopes—10 percent

Contrasting inclusions:

- Inclusion 1: Suak very stony loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Rock outcrop—5 percent
- Inclusion 3: Segura very cobbly loam, 15 to 30 percent slopes—3 percent
- Inclusion 4: Lithic Argixerolls very gravelly loam, 15 to 30 percent slopes—2 percent

Characteristics of the Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Singleleaf pinyon, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Cool Cropper Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Rubble Land

Position on landscape: Side slopes of mountains

Parent material: Andesite

Contrasting Inclusions

Inclusion 1

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper, convex side slopes of mountains

Distinctive present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Slightly concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 4

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, low sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Cropper soils—VIIIs, nonirrigated; Rubble land—VIIIIs

Range site: Cropper soil—028BY076NV; the cool Cropper soil—028BY058NV; Rubble land—none; Inclusion 1—028BY032NV; Inclusion 2—none; Inclusion 3—028BY087NV; Inclusion 4—028BY064NV

780—Bobs-Orr-Urmahot association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Bobs very gravelly loam, 4 to 15 percent slopes—50 percent
- Orr gravelly sandy loam, 4 to 15 percent slopes—20 percent
- Urmahot very gravelly loam, 4 to 15 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Devilsgait silt loam, 2 to 8 percent slopes—6 percent
- Inclusion 2: Cassiro stony loam, 4 to 15 percent slopes—6 percent
- Inclusion 3: Pioche very cobbly loam, 8 to 30 percent slopes—2 percent
- Inclusion 4: Biken very gravelly fine sandy loam, 8 to 30 percent slopes—1 percent

Characteristics of the Bobs Soil

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mainly alluvium derived from limestone but also some loess high in content of ash

Slope range: 4 to 15 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Big sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Indurated petrocalcic material

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 7 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1;
wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Orr Soil

Classification: Aridic Argixerolls, fine-loamy, mixed, mesic

Position on landscape: Inset fans

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Big sagebrush, basin
wildrye, bluegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 100 days

Typical Profile

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 35 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 35 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.9 to 7.9 inches

Water-supplying capacity: 8.5 to 11.5 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5;
wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic,
shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Black sagebrush, bluebunch
wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1;
wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Inset fans adjacent to stream channels

Distinctive present vegetation: Mountain big sagebrush, basin wildrye

Inclusion 2

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Upper fan piedmont remnants

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Hills adjacent to fan piedmonts

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Convex side slopes of fan piedmont remnants that have a rock core

Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Interpretive Groups

Capability classification: Orr soil—Ive, irrigated; Bobs and Urmafot soils—VIIIs, Orr soil—VIc, nonirrigated

Range site: Bobs soil—028BY094NV; Orr soil—028BY082NV; Urmafot soil—028BY006NV; Inclusion 1—028BY024NV; Inclusion 2—028BY030NV; Inclusion 3—028BY062NV; Inclusion 4—028BY083NV

783—Bobs very gravelly loam, 2 to 8 percent slopes

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major component:

- Bobs very gravelly loam, 2 to 8 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Tulase silt loam, 0 to 4 percent slopes—10 percent
- Inclusion 2: Palinor gravelly loam, 2 to 8 percent slopes—2 percent
- Inclusion 3: Pern silt loam, 0 to 4 percent slopes—2 percent
- Inclusion 4: Urmafot gravelly loam, 2 to 8 percent slopes—1 percent

Characteristics of the Bobs Soil

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mainly alluvium derived from limestone but also some loess high in content of ash

Slope range: 2 to 8 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Big sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Indurated petrocalcic material

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 7 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1;
wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 4

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Bobs soil—VIIIs, nonirrigated

Range site: Bobs soil—028BY094NV; Inclusion 1—028BY045NV; Inclusion 2—028BY011NV; Inclusion 3—028BY003NV; Inclusion 4—028BY006NV

790—Bylo-Tulase association

Map Unit Setting

Position on landscape: Lake plains and fan skirts

Composition

Major components:

- Bylo silt loam, 0 to 2 percent slopes—65 percent
- Tulase silt loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Yody gravelly sandy loam, 2 to 4 percent slopes—6 percent
- Inclusion 2: Typic Camborthids silt loam, 0 to 2 percent slopes—4 percent
- Inclusion 3: Zimwala silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 4: Cowgil very gravelly sandy loam, 0 to 4 percent slopes—2 percent

Characteristics of the Bylo Soil

Classification: Typic Camborthids, fine-silty, mixed, mesic

Position on landscape: Outer margins of lake plains adjacent to fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 60 inches

Texture: Silty clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 11.0 to 13.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5;
wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5;
wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants adjacent to fan skirts

Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass

Inclusion 2

Classification: Typic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Lake plains

Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Inclusion 3

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants adjacent to fan skirts

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Bylo and Tulase soils—IIC, irrigated, VIc, nonirrigated

Range site: Bylo soil—028BY013NV; Tulase soil—028BY045NV; Inclusion 1—028BY086NV; Inclusion 2—028BY074NV; Inclusion 3—028BY013NV; Inclusion 4—028BY010NV

793—Bylo silt loam, 0 to 2 percent slopes

Map Unit Setting

Position on landscape: Inset fans

Composition

Major component:

- Bylo silt loam, 0 to 2 percent slopes—90 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Calciorthids gravelly sandy loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 0 to 2 percent slopes—3 percent

- Inclusion 3: Durorthidic Xeric Torriorthents silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Bylo Soil

Classification: Typic Camborthids, fine-silty, mixed, mesic

Position on landscape: Inset fans

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 60 inches

Texture: Silty clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 11.0 to 13.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, fine-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Bylo soil—IIC, irrigated, VIc, nonirrigated

Range site: Bylo soil—028BY013NV; Inclusion 1—028BY010NV; Inclusion 2—028BY010NV; Inclusion 3—028BY010NV

800—Broland association

Map Unit Setting

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Broland very gravelly loam, 4 to 15 percent slopes—65 percent
- Broland very gravelly loam, 15 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Urmafot very gravelly loam, 30 to 50 percent slopes—7 percent
- Inclusion 2: Parisa gravelly loam, 4 to 15 percent slopes—6 percent
- Inclusion 3: Biken very gravelly fine sandy loam, 4 to 15 percent slopes—1 percent
- Inclusion 4: Atlow very gravelly loam, 4 to 15 percent slopes—1 percent

Characteristics of the Less Sloping Broland Soil

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium derived from volcanic rock

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 to 40 inches

Texture: Strongly cemented duripan

Consistence: Extremely hard, extremely firm

Depth: 40 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Moderately Steep Broland Soil

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants

Parent material: Mixed alluvium derived from volcanic rock

Slope range: 15 to 30 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 to 40 inches

Texture: Strongly cemented duripan

Consistence: Extremely hard, extremely firm

Depth: 40 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper side slopes of fan piedmont remnants on the upper part of the unit

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Convex side slopes of fan piedmont remnants that have a rock core

Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Inclusion 4

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Hills adjacent to fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Interpretive Groups

Capability classification: Broland soils—VIIIs, nonirrigated

Range site: The less sloping Broland soil—028BY089NV; the moderately steep Broland soil—028BY089NV;

Inclusion 1—028BY008NV; Inclusion 2—

028BY010NV; Inclusion 3—028BY083NV; Inclusion

4—028BY089NV

801—Broland very gravelly loam, 4 to 8 percent slopes

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major component:

- Broland very gravelly loam, 4 to 8 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Aridic Argixerolls gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Tulasie silt loam, 2 to 4 percent slopes—5 percent
- Inclusion 3: Broyles very fine sandy loam, 2 to 4 percent slopes—4 percent
- Inclusion 4: Aridic Durixerolls gravelly loam, 2 to 8 percent slopes—1 percent

Characteristics of the Broland Soil

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium derived from volcanic rock

Slope range: 4 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 3 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches
Texture: Gravelly clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 9 to 16 inches
Texture: Extremely gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 to 19 inches
Texture: Extremely gravelly sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 19 to 40 inches
Texture: Strongly cemented duripan
Consistence: Extremely hard, extremely firm

Depth: 40 to 60 inches
Texture: Extremely gravelly coarse sand
Structure: Massive
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 2.5 to 3.5 inches
Water-supplying capacity: 6 to 9 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Argixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Fan piedmont remnants on the upper part of the unit
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Duric Camborthids, coarse-loamy, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 4

Classification: Aridic Durixerolls, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Broland soil—VIIIs, nonirrigated
Range site: Broland soil—028BY089NV; Inclusion 1—028BY010NV; Inclusion 2—028BY045NV; Inclusion 3—028BY017NV; Inclusion 4—028BY010NV

802—Broland-Yody association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Broland very gravelly loam, 2 to 8 percent slopes—45 percent
- Yody gravelly sandy loam, 2 to 8 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Tulase silt loam, 0 to 2 percent slopes—5 percent

- Inclusion 2: Xerollic Durorthids gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Palinoz gravelly loam, 4 to 15 percent slopes—5 percent

Characteristics of the Broland Soil

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium derived from volcanic rock

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,900 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 to 40 inches

Texture: Strongly cemented duripan

Consistence: Extremely hard, extremely firm

Depth: 40 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,900 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 5.0 to 6.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Convex side slopes of fan piedmont remnants
Distinctive present vegetation: Pigmy sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Side slopes of fan piedmont remnants
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Yody soil—IIIe, irrigated; Broland soil—VIIIs, Yody soil—VIs, nonirrigated

Range site: Broland soil—028BY089NV; Yody soil—028BY086NV; Inclusion 1—028BY045NV; Inclusion 2—028BY040NV; Inclusion 3—028BY016NV

803—Broland-Broyles association

Map Unit Setting

Position on landscape: Fan piedmonts and fan skirts

Composition

Major components:

- Broland very gravelly loam, 2 to 8 percent slopes—65 percent
- Broyles very fine sandy loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Typic Durargids very gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Xeric Torriorthents gravelly sandy loam, 0 to 4 percent slopes—5 percent

Characteristics of the Broland Soil

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium derived from volcanic rock

Slope range: 2 to 8 percent

Elevation: 5,800 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 to 40 inches

Texture: Strongly cemented duripan

Consistence: Extremely hard, extremely firm

Depth: 40 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Broyles Soil

Classification: Duric Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Thin loess mantle over mixed loamy alluvium

Slope range: 2 to 8 percent

Elevation: 5,800 to 6,500 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 12 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 12 to 60 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 6.0 to 7.5 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Typic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Convex areas on fan piedmont remnants

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, spring hopsage, Indian ricegrass

Interpretive Groups

Capability classification: Broyles soil—IIle, irrigated; Broland soil—VIIIs, Broyles soil—VIIc, nonirrigated

Range site: Broland soil—028BY089NV; Broyles soil—028BY075NV; Inclusion 1—028BY010NV; Inclusion 2—028BY075NV; Inclusion 3—028BY052NV

810—Yody-Fax association**Map Unit Setting**

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Yody gravelly sandy loam, 4 to 15 percent slopes—50 percent
- Fax very cobbly coarse sandy loam, 4 to 15 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Palinor gravelly loam, 4 to 15 percent slopes—7 percent
- Inclusion 2: Shabliss gravelly loam, 4 to 15 percent slopes—7 percent
- Inclusion 3: Selti very stony coarse sandy loam, 8 to 15 percent slopes—1 percent

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 4 to 15 percent

Elevation: 6,200 to 6,900 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Fax Soil

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 4 to 15 percent

Elevation: 6,200 to 6,900 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 15 percent

Depth: 0 to 3 inches

Texture: Very cobbly coarse sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 22 inches

Texture: Very gravelly sandy clay loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 22 to 48 inches

Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 20 to 36 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Upper fan piedmont remnants

Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Interpretive Groups

Capability classification: Yody soil—Ive, irrigated; Yody soil—VIs, Fax soil—VIIIs, nonirrigated

Range site: Yody soil—028BY086NV; Fax soil—028BY007NV; Inclusion 1—028BY011NV; Inclusion 2—028BY080NV; Inclusion 3—028BY007NV

822—Pits-Dumps complex**Map Unit Setting**

Position on landscape: Mountains

Composition

Major components:

- Pits, 0 to 75 percent slopes—50 percent
- Dumps, 0 to 50 percent slopes—50 percent

Characteristics of the Pits

Elevation: 7,000 to 7,800 feet

Characteristics of the Dumps

Slope range: 0 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: None

Typical Profile

Depth: 0 to 60 inches

Texture: Fragmental material

Soil and Water Features

Frequency of flooding: None

Permeability: Rapid

Available water capacity: 0.6 inch to 1.2 inches

Runoff: Medium

Hydrologic group: A

Wind erodibility group: 8

Shrink-swell potential: Low

Interpretive Groups

Capability classification: Pits and Dumps—VIIIs

Range site: Pits and Dumps—none

823—Dumps**Map Unit Setting**

Position on landscape: Basin floors

Composition

Major component:

- Dumps, 0 to 15 percent slopes—100 percent

Characteristics of the Dumps

Slope range: 0 to 15 percent

Elevation: 6,100 to 6,200 feet

Dominant present vegetation: None

Typical Profile

Depth: 0 to 60 inches

Texture: Fragmental material

Soil and Water Features

Frequency of Flooding: None

Permeability: Rapid

Available water capacity: 0.6 inch to 1.2 inches

Runoff: Slow

Hydrologic group: A

Wind erodibility group: 8

Shrink-swell potential: Low

Interpretive Groups

Capability classification: Dumps—VIIIs

Range site: Dumps—none

830—Genaw-Tulase association**Map Unit Setting**

Position on landscape: Hills

Composition

Major components:

- Genaw silt loam, 2 to 8 percent slopes—50 percent

- Tulase silt loam, 0 to 4 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Roden very gravelly clay loam, 4 to 15 percent slopes—8 percent
- Inclusion 2: Lithic Xeric Torriorthents very gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Xerollic Camborthids very gravelly loam, 0 to 4 percent slopes—3 percent

Characteristics of the Genaw Soil

Classification: Xerollic Haplargids, loamy, mixed, mesic, shallow

Position on landscape: Hills

Parent material: Loess-mantled residuum derived from tuffaceous sediments

Slope range: 2 to 8 percent

Elevation: 6,100 to 6,400 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 10 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 16 inches

Texture: Calcareous siltstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 3.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.49; T value—1;
wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Tulse Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Drainageways on hills
Parent material: Silty alluvium derived from mixed rocks and some volcanic ash
Slope range: 0 to 4 percent
Elevation: 6,100 to 6,400 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5;
wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow
Position on landscape: Side slopes of hills
Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Inclusion 2

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Summits of hills
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Xerollic Camborthids, fine-loamy, mixed, mesic
Position on landscape: Drainageways on hills
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Tulse soil—Ile, irrigated; Genaw soil—VIIIs, Tulse soil—VIc, nonirrigated
Range site: Genaw soil—028BY010NV; Tulse soil—028BY045NV; Inclusion 1—028BY083NV; Inclusion 2—028BY080NV; Inclusion 3—028BY010NV

842—Orr-Fax association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Orr gravelly sandy loam, 2 to 8 percent slopes—50 percent
- Fax very cobbly coarse sandy loam, 4 to 8 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Aridic Haploxerolls gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Aridic Durixerolls gravelly loam, 8 to 15 percent slopes—4 percent
- Inclusion 3: Yody gravelly sandy loam, 2 to 4 percent slopes—3 percent
- Inclusion 4: Typic Argixerolls gravelly silt loam, 4 to 15 percent slopes—3 percent

Characteristics of the Orr Soil

Classification: Aridic Argixerolls, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 100 days

Typical Profile

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 35 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 35 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.9 to 7.9 inches

Water-supplying capacity: 8.5 to 11.5 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Fax Soil

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 4 to 8 percent

Elevation: 6,500 to 7,000 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 15 percent

Depth: 0 to 3 inches

Texture: Very cobbly coarse sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 22 inches

Texture: Very gravelly sandy clay loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 22 to 48 inches

Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 20 to 36 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Haploxerolls, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants on the upper part of the unit

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass

Inclusion 4

Classification: Typic Argixerolls, fine, montmorillonitic, mixed, mesic

Position on landscape: Concave side slopes of fan piedmont remnants on the upper part of the unit

Distinctive present vegetation: Antelope bitterbrush, mountain big sagebrush, Idaho fescue, bluebunch wheatgrass

Interpretive Groups

Capability classification: Orr soil—IIIe, irrigated; Orr soil—VIc, Fax soil—VIIc, nonirrigated

Range site: Orr soil—028BY007NV; Fax soil—028BY007NV; Inclusion 1—028BY009NV; Inclusion 2—028BY011NV; Inclusion 3—028BY086NV; Inclusion 4—025XY007NV

850—Onkeyo-Pookaloo-Adobe association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Onkeyo very gravelly silt loam, 15 to 50 percent slopes—35 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—30 percent
- Adobe very gravelly silt loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Xine gravelly loam, 15 to 50 percent slopes—8 percent
- Inclusion 2: Grink very stony loam, 15 to 50 percent slopes—3 percent
- Inclusion 3: Cavehill very gravelly silt loam, 15 to 50 percent slopes—2 percent

- Inclusion 4: Tecomar extremely gravelly silt loam, 8 to 30 percent slopes—2 percent

Characteristics of the Onkeyo Soil

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper, slightly convex side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 8 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 15 inches

Texture: Extremely cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 0.5 inch to 2.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Adobe Soil

Classification: Lithic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Upper, convex side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 8,000 to 8,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 85 percent

Depth: 0 to 5 inches

Texture: Very gravelly silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 17 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 17 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains on the upper part of the unit

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Concave, north-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Onkeyo, Pookaloo, and Adobe soils—VIIIs, nonirrigated

Range site: Onkeyo soil—028BY079NV; Pookaloo soil—028BY060NV; Adobe soil—028BY027NV; Inclusion 1—028BY088NV; Inclusion 2—028BY043NV; Inclusion 3—028BY062NV; Inclusion 4—028BY008NV

851—Grink-Onkeyo-Xine association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Grink very stony loam, 15 to 50 percent slopes—35 percent
- Onkeyo very gravelly silt loam, 15 to 50 percent slopes—30 percent

- Xine very gravelly loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—5 percent
- Inclusion 2: Pookaloo very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Tecomar extremely gravelly silt loam, 15 to 50 percent slopes—3 percent
- Inclusion 4: Amelar very gravelly loam, 15 to 50 percent slopes—2 percent

Characteristics of the Grink Soil

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,200 to 8,500 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 2 percent; pebbles, 25 percent

Depth: 0 to 7 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 to 19 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate
Available water capacity: 1.0 to 3.0 inches
Water-supplying capacity: 10 to 12.5 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1;
 wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Onkeyo Soil

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Upper side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 7,200 to 8,500 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 8 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 15 inches
Texture: Very cobbly silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None

Permeability: Moderately slow
Available water capacity: 0.5 inch to 2.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1;
 wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Xine Soil

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Lower, concave side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 7,200 to 7,800 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 7 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 7 to 35 inches
Texture: Very cobbly loam
Structure: Massive
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 35 inches
Texture: Weathered limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None

Permeability: Moderately rapid
Available water capacity: 3.0 to 4.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2;
 wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower, south-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: South-facing, concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Grink, Onkeyo, and Xine soils—VIIIs, nonirrigated

Range site: Grink soil—028BY043NV; Onkeyo soil—028BY079NV; Xine soil—028BY088NV; Inclusion 1—none; Inclusion 2—028BY060NV; Inclusion 3—028BY008NV; Inclusion 4—028BY088NV

852—Grink-Onkeyo-Halacan association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Grink very stony loam, 30 to 75 percent slopes—40 percent
- Onkeyo very gravelly silt loam, 30 to 75 percent slopes—30 percent
- Halacan very gravelly loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Pookaloo very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Rock outcrop—2 percent
- Inclusion 3: Lithic Haploxerolls very gravelly loam, 15 to 50 percent slopes—2 percent
- Inclusion 4: Typic Calcixerolls gravelly silt loam, 4 to 15 percent slopes—1 percent

Characteristics of the Grink Soil

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: Convex side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 7,200 to 8,500 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 2 percent; pebbles, 25 percent

Depth: 0 to 7 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 to 19 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 3.0 inches
Water-supplying capacity: 10 to 12.5 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Onkeyo Soil

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Concave side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 30 to 75 percent
Elevation: 7,200 to 8,500 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 8 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 15 inches
Texture: Very cobbly silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 0.5 inch to 2.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Halacan Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic
Position on landscape: Crests and upper, convex side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 8,000 to 8,500 feet
Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches
Average annual air temperature: About 38 degrees F
Frost-free period: About 40 days

Typical Profile

Surface cover: Flagstones, 10 percent; channers, 60 percent

Depth: 0 to 8 inches
Texture: Very gravelly loam
Structure: Granular
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 19 inches
Texture: Very channery loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 19 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xerollic Calciorthis, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Utah serviceberry, antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Inclusion 4

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North- and east-facing, concave side slopes of mountains

Distinctive present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Interpretive Groups

Capability classification: Grink, Onkeyo, and Halacan soils—Vlls, nonirrigated

Range site: Grink soil—028BY043NV; Onkeyo soil—028BY079NV; Halacan soil—028BY048NV; Inclusion 1—028BY060NV; Inclusion 2—none; Inclusion 3—028BY091NV; Inclusion 4—028BY063NV

870—Amelar-Eoj association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Amelar gravelly silt loam, 4 to 15 percent slopes—35 percent
- Eoj very stony loam, 4 to 15 percent slopes—30 percent
- Amelar very gravelly loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Pookaloo very gravelly loam, 8 to 30 percent slopes—7 percent
- Inclusion 2: Onkeyo very gravelly silt loam, 8 to 30 percent slopes—6 percent
- Inclusion 3: Pern silt loam, 4 to 15 percent slopes—1 percent
- Inclusion 4: Tecomar extremely gravelly silt loam, 4 to 15 percent slopes—1 percent

Characteristics of the Gravelly Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Convex summits and side slopes of hills

Parent material: Alluvium derived from limestone and sandstone

Slope range: 4 to 15 percent

Elevation: 8,000 to 9,200 feet

Dominant present vegetation: Utah serviceberry, antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 7 inches

Texture: Gravelly silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 to 15 inches

Texture: Very cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 5.0 to 8.0 inches

Water-supplying capacity: 12 to 14 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Eoj Soil

Classification: Typic Palexerolls, fine, montmorillonitic, frigid

Position on landscape: Slightly concave side slopes of hills

Parent material: Colluvium derived from quartzite, conglomerate, and limestone

Slope range: 4 to 15 percent

Elevation: 8,000 to 9,200 feet

Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, muttongrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 80 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 8 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 60 inches

Texture: Cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 10.5 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Very Gravelly Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper side slopes of hills

Parent material: Colluvium and alluvium derived from limestone and tuff

Slope range: 4 to 15 percent

Elevation: 8,000 to 9,200 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 7 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 to 15 inches

Texture: Very cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 5.0 to 8.0 inches

Water-supplying capacity: 12 to 14 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of hills

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of hills

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Areas adjacent to springs and seeps

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 4

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Hill crests adjacent to areas of limestone outcrops

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: The gravelly Amelar soil—Vlc, Eoj soil and the very gravelly Amelar soil—VIIs, nonirrigated

Range site: The gravelly Amelar soil—028BY091NV; Eoj soil—028BY092NV; the very gravelly Amelar soil—028BY088NV; Inclusion 1—028BY060NV; Inclusion 2—028BY079NV; Inclusion 3—028BY041NV; Inclusion 4—028BY008NV

871—Amelar-Urmafot association

Map Unit Setting

Position on landscape: Partial ballenas

Composition

Major components:

- Amelar gravelly silt loam, 8 to 30 percent slopes—55 percent
- Urmafot very gravelly loam, 4 to 15 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Amelar very gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 2: Urmafot very gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 3: Lithic Argixerolls very gravelly loam, 4 to 15 percent slopes—5 percent

Characteristics of the Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave side slopes of partial ballenas

Parent material: Alluvium derived from limestone and sandstone

Slope range: 8 to 30 percent

Elevation: 6,800 to 7,500 feet

Dominant present vegetation: Utah serviceberry, antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 6 inches

Texture: Gravelly silt loam

Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 6 to 15 inches
Texture: Very cobbly silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 5.0 to 8.0 inches
Water-supplying capacity: 12 to 14 inches
Runoff: Rapid
Hydrologic group: B
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Urmatot Soil

Classification: Orthodic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Summits of partial ballenas
Parent material: Mixed alluvium
Slope range: 4 to 15 percent
Elevation: 6,800 to 7,500 feet
Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches
Texture: Very gravelly loam
Structure: Platy

Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Lower, concave side slopes of partial ballenas
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Orthodic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Crests of partial ballenas on the upper part of the unit
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Partial ballenas adjacent to mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Amelar soil—Vle, Urmafot soil—VIIIs, nonirrigated

Range site: Amelar soil—028BY091NV; Urmafot soil—028BY006NV; Inclusion 1—028BY088NV; Inclusion 2—028BY008NV; Inclusion 3—028BY079NV

874—Amelar-Pookaloo-Tulase association**Map Unit Setting**

Position on landscape: Hills

Composition

Major components:

- Amelar very gravelly loam, 15 to 30 percent slopes—45 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—30 percent
- Tulase silt loam, 2 to 8 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Grink very stony loam, 8 to 30 percent slopes—5 percent
- Inclusion 2: Aridic Haploxerolls gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 3: Aridic Calcixerolls gravelly loam, 8 to 30 percent slopes—2 percent

Characteristics of the Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: North-facing, concave side slopes of hills

Parent material: Colluvium derived from limestone and sandstone

Slope range: 15 to 30 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 6 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 6 to 15 inches

Texture: Very cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 5.0 to 8.0 inches

Water-supplying capacity: 12 to 14 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Drainageways on hills

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 2 to 8 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper side slopes of hills adjacent to mountains

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Aridic Haploxerolls, fine-loamy, mixed, mesic

Position on landscape: Mountains adjacent to hills

Distinctive present vegetation: Big sagebrush, basin wildrye, bluegrass, thickspike wheatgrass

Inclusion 3

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Mountains adjacent to hills

Distinctive present vegetation: Utah serviceberry, antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Interpretive Groups

Capability classification: Tulase soil—IIIe, irrigated; Amelar and Pookaloo soils—VIIIs, Tulase soil—VIc, nonirrigated

Range site: Amelar soil—028BY088NV; Pookaloo soil—028BY060NV; Tulase soil—028BY045NV; Inclusion 1—028BY043NV; Inclusion 2—028BY082NV; Inclusion 3—028BY091NV

875—Amelar-Eoj-Hardol association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Amelar gravelly silt loam, 15 to 30 percent slopes—35 percent
- Eoj very stony loam, 8 to 30 percent slopes—30 percent
- Hardol very gravelly silt loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Onkeyo very gravelly silt loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Adobe very gravelly silt loam, 30 to 50 percent slopes—5 percent
- Inclusion 3: Haunchee very cobbly loam, 15 to 50 percent slopes—5 percent

Characteristics of the Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Slightly concave side slopes of mountains

Parent material: Colluvium derived from limestone and sandstone

Slope range: 15 to 30 percent

Elevation: 8,000 to 9,200 feet

Dominant present vegetation: Utah serviceberry, antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 6 inches

Texture: Gravelly silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 6 to 15 inches

Texture: Very cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 5.0 to 8.0 inches

Water-supplying capacity: 12 to 14 inches

Runoff: Rapid

Hydrologic group: B

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Eoj Soil

Classification: Typic Palexerolls, fine, montmorillonitic, frigid

Position on landscape: Broad, rounded crests and convex side slopes of mountains

Parent material: Colluvium derived from quartzite, conglomerate, and limestone

Slope range: 8 to 30 percent

Elevation: 8,000 to 9,200 feet

Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, muttongrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 80 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 8 inches
Texture: Very stony loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 60 inches
Texture: Cobbly clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 6.0 to 7.0 inches
Water-supplying capacity: 10.5 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Hardol Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Concave side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 8,000 to 9,200 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, needlegrass

Climatic Data

Average annual precipitation: About 20 inches
Average annual air temperature: About 40 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 20 percent; pebbles, 20 percent
Depth: 0 to 12 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky

Consistence: Slightly hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 to 33 inches
Texture: Extremely gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 33 to 60 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 5.0 inches
Water-supplying capacity: 11 to 14 inches
Runoff: Rapid
Hydrologic group: B
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Side slopes of mountains
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic
Position on landscape: Upper side slopes of mountains
Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Amelar soil—Vle, Eoj and Hardol soils—VIIs, nonirrigated

Range site: Amelar soil—028BY091NV; Eoj soil—028BY092NV; Hardol soil—028BY085NV; Inclusion 1—028BY079NV; Inclusion 2—028BY027NV; Inclusion 3—028BY032NV

876—Amelar-Xine-Halacan association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Amelar gravelly silt loam, 15 to 50 percent slopes—40 percent
- Xine very gravelly loam, 15 to 50 percent slopes—30 percent
- Halacan very gravelly loam, 15 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Calcic Cryoborolls extremely gravelly loam, 4 to 15 percent slopes—9 percent
- Inclusion 2: Typic Calcixerolls gravelly silt loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Adobe very gravelly silt loam, 8 to 30 percent slopes—1 percent
- Inclusion 4: Grink very stony loam, 4 to 15 percent slopes—1 percent

Characteristics of the Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper side slopes of mountains

Parent material: Colluvium derived from limestone and sandstone

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Utah serviceberry, antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 6 inches

Texture: Gravelly silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 6 to 15 inches

Texture: Very cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 5.0 to 8.0 inches

Water-supplying capacity: 12 to 14 inches

Runoff: Rapid

Hydrologic group: B

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Xine Soil

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Lower side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,500 to 7,800 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 7 to 35 inches
Texture: Very cobbly loam
Structure: Massive
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 35 inches
Texture: Weathered limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid
Available water capacity: 3.0 to 4.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Halacan Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic
Position on landscape: Crests and upper, convex side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 30 percent
Elevation: 8,000 to 9,000 feet
Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches
Average annual air temperature: About 38 degrees F
Frost-free period: About 40 days

Typical Profile

Surface cover: Flagstones, 10 percent; channers, 10 percent; pebbles, 60 percent
Depth: 0 to 8 inches
Texture: Very gravelly loam

Structure: Granular
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 19 inches
Texture: Very channery loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 19 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Calcic Cryoborolls, loamy-skeletal, mixed
Position on landscape: Broad crests of mountains
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Typic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Drainageways on mountains
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Classification: Lithic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Crests of mountains
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid
Position on landscape: Crests of mountains
Distinctive present vegetation: Curlleaf

mountainmahogany, mountain big sagebrush,
bluebunch wheatgrass

Interpretive Groups

Capability classification: Amelar soil—VIIe, Xine and
Halacan soils—VIIs, nonirrigated

Range site: Amelar soil—028BY091NV; Xine soil—
028BY088NV; Halacan soil—028BY048NV; Inclusion
1—028BY048NV; Inclusion 2—028BY093NV;
Inclusion 3—028BY027NV; Inclusion 4—
028BY043NV

880—Wredah-Amelar-Orr association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Wredah gravelly sandy loam, 4 to 15 percent slopes—
40 percent
- Amelar very gravelly loam, 4 to 15 percent slopes—25
percent
- Orr gravelly sandy loam, 2 to 8 percent slopes—20
percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents very gravelly loam, 8 to
30 percent slopes—7 percent
- Inclusion 2: Bobs very gravelly loam, 8 to 30 percent
slopes—7 percent
- Inclusion 3: Pern silt loam, 0 to 4 percent slopes—1
percent

Characteristics of the Wredah Soil

Classification: Durargidic Argixerolls, fine-loamy, mixed,
mesic

Position on landscape: Convex summits and side slopes
of hills

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Big sagebrush, Thurber
needlegrass

Climatic Data

Average annual precipitation: About 11 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 2 percent; pebbles, 30 percent

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 17 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 17 to 34 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 34 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm and brittle

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 3.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.17; T value—5;
wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed,
frigid

Position on landscape: Concave side slopes of hills

Parent material: Alluvium derived from limestone and
sandstone

Slope range: 4 to 15 percent

Elevation: 7,000 to 7,500 feet

Dominant present vegetation: Mountain big sagebrush,
bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 6 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 6 to 15 inches
Texture: Very cobbly silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 5.0 to 8.0 inches
Water-supplying capacity: 12 to 14 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Orr Soil

Classification: Aridic Argixerolls, fine-loamy, mixed, mesic
Position on landscape: Drainageways on hills
Parent material: Mixed alluvium
Slope range: 2 to 8 percent
Elevation: 6,800 to 7,000 feet
Dominant present vegetation: Big sagebrush, Thurber needleglass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 50 degrees F
Frost-free period: About 100 days

Typical Profile

Depth: 0 to 5 inches
Texture: Gravelly sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 5 to 35 inches
Texture: Gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 35 to 60 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 6.9 to 7.9 inches
Water-supplying capacity: 8.5 to 11.5 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic, shallow
Position on landscape: South-facing side slopes of hills
Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow

Position on landscape: Summits of hills

Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 3

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Narrow drainageways on hills

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Orr soil—IIIe, irrigated; Wredah and Orr soils—VIs, Amelar soil—VIIIs, nonirrigated

Range site: Wredah soil—028BY007NV; Amelar soil—028BY088NV; Orr soil—028BY007NV; Inclusion 1—028BY060NV; Inclusion 2—028BY094NV; Inclusion 3—028BY003NV

900—Abgese-Roden-Orr association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Abgese sandy loam, 4 to 15 percent slopes—40 percent
- Roden very gravelly clay loam, 8 to 30 percent slopes—25 percent
- Orr gravelly sandy loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Paleargids gravelly silt loam, 4 to 15 percent slopes—5 percent
- Inclusion 2: Xerollic Haplargids very gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Xerollic Camborthids very gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—3 percent

Characteristics of the Abgese Soil

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic

Position on landscape: Slightly concave summits and side slopes of hills

Parent material: Colluvium derived from tuffaceous sedimentary rocks

Slope range: 4 to 15 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 22 inches

Texture: Gravelly sandy clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 22 to 43 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 43 to 60 inches

Texture: Very gravelly loamy sand

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Convex side slopes of hills

Parent material: Residuum and colluvium derived from shale and sandstone

Slope range: 8 to 30 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 2 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 11 inches

Texture: Fractured shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Orr Soil

Classification: Aridic Argixerolls, fine-loamy, mixed, mesic

Position on landscape: Concave side slopes of hills

Parent material: Colluvium derived from sandstone and shale

Slope range: 4 to 15 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 100 days

Typical Profile

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 35 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 35 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.9 to 7.9 inches

Water-supplying capacity: 8.5 to 11.5 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Paleargids, fine, montmorillonitic, mesic

Position on landscape: Upper, concave side slopes of hills

Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 2

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic

Position on landscape: Summits of the lower hills

Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Inclusion 3

Classification: Xerollic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Drainageways on hills

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Classification: Xeric Torriorthents, fine-loamy, mixed, mesic

Position on landscape: Drainageways on hills on the lower part of the unit

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Orr soil—Ive, irrigated; Abgese and Orr soils—Vlc, Roden soil—VIIs, nonirrigated

Range site: Abgese soil—028BY010NV; Roden soil—028BY016NV; Orr soil—028BY010NV; Inclusion 1—028BY037NV; Inclusion 2—028BY089NV; Inclusion 3—028BY045NV; Inclusion 4—028BY028NV

902—Abgese-Risley-Roden association

Map Unit Setting

Position on landscape: Rock pediments and fan piedmonts

Composition

Major components:

- Abgese sandy loam, 2 to 8 percent slopes—40 percent
- Risley clay loam, 2 to 8 percent slopes—30 percent
- Roden very gravelly clay loam, 4 to 15 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—6 percent
- Inclusion 2: Xerollic Durargids, 4 to 15 percent slopes—4 percent
- Inclusion 3: Xerertic Torriorthents silty clay loam, 0 to 2 percent slopes—3 percent
- Inclusion 4: Durixerollic Haplargids gravelly loam, 2 to 8 percent slopes—2 percent

Characteristics of the Abgese Soil

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from tuffaceous sedimentary rocks

Slope range: 2 to 8 percent

Elevation: 6,200 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 22 inches

Texture: Gravelly sandy clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 22 to 43 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 43 to 60 inches

Texture: Very gravelly loamy sand

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.17; T value—5;
wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Risley Soil

Classification: Xerollic Haplargids, fine, montmorillonitic, mesic

Position on landscape: Rock pediments

Parent material: Residuum derived from shale and sandstone

Slope range: 2 to 8 percent

Elevation: 6,200 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 11 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 3 inches

Texture: Clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 29 inches

Texture: Clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 29 inches

Texture: Weathered shale

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.0 to 5.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.32; T value—2;
wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Roden Soil

Classification: Xeric Torriorthents, clayey-skeletal, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Rock pediments

Parent material: Residuum and colluvium derived from shale and sandstone

Slope range: 4 to 15 percent

Elevation: 6,200 to 6,800 feet

Dominant present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 1 inch

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 8 inches

Texture: Very gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 inches

Texture: Fractured shale

Soil and Water Features

Depth to bedrock: 8 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1;
wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, fine-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Xerertic Torriorthents, fine, montmorillonitic, (calcareous), mesic

Position on landscape: Rock pediments

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Durixerollic Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Abgese soil—Vlc, Risley and Roden soils—VIIc, nonirrigated

Range site: Abgese soil—028BY010NV; Risley soil—028BY010NV; Roden soil—028BY083NV; Inclusion 1—028BY010NV; Inclusion 2—028BY010NV; Inclusion 3—028BY013NV; Inclusion 4—028BY010NV

911—Devilsgait-Duffer-Kunzler association

Map Unit Setting

Position on landscape: Flood plains and fan skirts

Composition

Major components:

- Devilsgait silt loam, 0 to 2 percent slopes—40 percent
- Duffer silt loam, 0 to 2 percent slopes—30 percent
- Kunzler loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Duffer silt loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Pern silt loam, 0 to 2 percent slopes—2 percent
- Inclusion 3: Devilsgait silt loam, 0 to 2 percent slopes—2 percent

- Inclusion 4: Boofuss silty clay, 0 to 2 percent slopes—1 percent

Characteristics of the Devilsgait Soil

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Flood plains

Parent material: Mixed silty alluvium and some loess and ash

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Basin big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 10 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 10 to 60 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 48 to 72 inches

Flooding: Occasional, for brief periods, from March through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 10 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: High

Characteristics of the Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Flood plains in areas of stream channel entrenchment

Parent material: Mixed alluvium and lake sediments
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,200 feet
Dominant present vegetation: Black greasewood, basin wildrye, alkali sacaton

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Moderately alkaline
Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches
Texture: Silty clay loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 36 to 60 inches
Frequency of flooding: Rare
Permeability: Moderately slow
Available water capacity: 11.5 to 12.5 inches
Water-supplying capacity: 11 to 13 inches
Runoff: Very slow
Hydrologic group: C
Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: High

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Fan skirts adjacent to flood plains
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,200 feet
Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent
Depth: 0 to 10 inches
Texture: Loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches
Texture: Loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches
Texture: Sandy loam
Structure: Massive
Consistence: Hard, brittle
Reaction: Very strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 6.5 to 9.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic
Position on landscape: Flood plains
Distinctive present vegetation: Alkali sacaton, alkali cordgrass

Inclusion 2

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic
Position on landscape: Flood plains adjacent to areas of stream channel entrenchment
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 3

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Flood plains adjacent to stream channels

Distinctive present vegetation: Bluegrass, sedge, rush

Inclusion 4

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic

Position on landscape: Alluvial flats adjacent to flood plains

Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Interpretive Groups

Capability classification: Devilsgait soil—IIIw, Duffer soil—IVw, irrigated; Devilsgait and Duffer soils—VIw, Kunzler soil—VIIc, nonirrigated

Range site: Devilsgait soil—028BY041NV; Duffer soil—028BY004NV; Kunzler soil—028BY028NV; Inclusion 1—028BY002NV; Inclusion 2—028BY003NV; Inclusion 3—028BY001NV; Inclusion 4—028BY020NV

913—Devilsgait silt loam, 0 to 2 percent slopes**Map Unit Setting**

Position on landscape: Flood plains

Composition

Major component:

- Devilsgait silt loam, 0 to 2 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torrifluvents silt loam, 0 to 2 percent slopes—7 percent
- Inclusion 2: Pern silt loam, 0 to 4 percent slopes—3 percent
- Inclusion 3: Kunzler loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Kolda silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Devilsgait Soil

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Flood plains

Parent material: Mixed silty alluvium and some loess and ash

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,400 feet

Dominant present vegetation: Basin wildrye, creeping wildrye

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 10 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 10 to 60 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 48 to 72 inches

Flooding: Occasional, for brief periods, from March through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 10 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: High

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torrifluvents, fine-silty, mixed (calcareous), mesic

Position on landscape: Flood plains

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 2

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Flood plains

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 3

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts adjacent to flood plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 4

Classification: Typic Haplaquolls, fine, montmorillonitic (calcareous), mesic

Position on landscape: Flood plains adjacent to stream channels

Distinctive present vegetation: Bluegrass, sedge, rush

Interpretive Groups

Capability classification: Devilsgait soil—IIIw, irrigated, VIw, nonirrigated

Range site: Devilsgait soil—028BY081NV; Inclusion 1—028BY041NV; Inclusion 2—028BY003NV; Inclusion 3—028BY028NV; Inclusion 4—028BY001NV

920—Abgese-Yody-Shabliss association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Abgese sandy loam, 2 to 4 percent slopes—45 percent
- Yody gravelly sandy loam, 2 to 4 percent slopes—20 percent
- Shabliss gravelly loam, 2 to 4 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Palino gravelly loam, 2 to 8 percent slopes—8 percent
- Inclusion 2: Tulase silt loam, 0 to 4 percent slopes—7 percent

Characteristics of the Abgese Soil

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from tuffaceous sedimentary rocks

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 22 inches

Texture: Gravelly sandy clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 22 to 43 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 43 to 60 inches

Texture: Very gravelly loamy sand

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Gravelly sandy loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches
Texture: Gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 5.0 to 6.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash
Slope range: 2 to 4 percent
Elevation: 6,000 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 3 to 13 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.0 inches
Water-supplying capacity: 5.5 to 6 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.37; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Yody soil—IIIe, irrigated; Abgese soil—VIc, Yody soil—VIs, Shabliss soil—VIIs, nonirrigated

Range site: Abgese soil—028BY010NV; Yody soil—028BY086NV; Shabliss soil—028BY080NV; Inclusion 1—028BY011NV; Inclusion 2—028BY045NV

930—Tosser loam, 0 to 4 percent slopes

Map Unit Setting

Position on landscape: Beach plains

Composition

Major component:

- Tosser loam, 0 to 4 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 0 to 4 percent slopes—9 percent
- Inclusion 2: Linoyer very fine sandy loam, 0 to 2 percent slopes—2 percent
- Inclusion 3: Heist silt loam, 0 to 2 percent slopes—2 percent
- Inclusion 4: Uwell silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Tosser Soil

Classification: Xerollic Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 8 inches

Texture: Loam

Structure: Platy

Consistence: Soft, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 24 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 24 to 60 inches

Texture: Stratified gravelly loamy coarse sand and extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Offshore bars on beach plains

Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to beach plains

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains adjacent to fluves

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Outer margins of beach plains adjacent to lake plains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Tosser soil—VIIIs, nonirrigated

Range site: Tosser soil—028BY016NV; Inclusion 1—028BY080NV; Inclusion 2—028BY013NV; Inclusion 3—028BY084NV; Inclusion 4—028BY054NV

940—Nyak-Heist association

Map Unit Setting

Position on landscape: Lake plains and fan skirts

Composition

Major components:

- Nyak fine sandy loam, 0 to 2 percent slopes—60 percent

- Heist silt loam, 0 to 2 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents silty clay loam, 0 to 2 percent slopes—5 percent

- Inclusion 2: Zimwala silt loam, 0 to 2 percent slopes—5 percent

- Inclusion 3: Katelana silt loam, 0 to 2 percent slopes—3 percent

- Inclusion 4: Zorravista fine sand, 0 to 4 percent slopes—2 percent

Characteristics of the Nyak Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 9 inches

Texture: Fine sandy loam

Structure: Platy

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 14 inches

Texture: Fine sandy loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 60 inches

Texture: Stratified fine sandy loam to silty clay loam

Structure: Platy

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: Rare

Permeability: Moderately slow

Available water capacity: 7.0 to 8.5 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.32; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to lake plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,300 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile*Depth:* 0 to 8 inches*Texture:* Silt loam*Structure:* Platy*Consistence:* Slightly hard, very friable*Reaction:* Moderately alkaline*Salinity:* Less than 2 mmhos per cm*Depth:* 8 to 40 inches*Texture:* Fine sandy loam*Structure:* Massive*Consistence:* Soft, very friable*Reaction:* Strongly alkaline*Salinity:* 2 to 4 mmhos per cm*Depth:* 40 to 60 inches*Texture:* Very fine sand*Structure:* Single grained*Consistence:* Loose*Reaction:* Strongly alkaline*Salinity:* 2 to 4 mmhos per cm**Soil and Water Features***Depth to a seasonal high water table:* More than 60 inches*Frequency of flooding:* None*Permeability:* Moderately rapid*Available water capacity:* 6.0 to 7.0 inches*Water-supplying capacity:* 8 to 12 inches*Runoff:* Slow*Hydrologic group:* B*Erosion factors (surface layer):* K value—.55; T value—5; wind erodibility group—4L*Hazard of erosion:* By water—slight; by wind—slight*Shrink-swell potential:* Low*Corrosivity:* Steel—high; concrete—low*Potential for frost action:* Moderate**Contrasting Inclusions****Inclusion 1***Classification:* Xeric Torriorthents, fine-silty, mixed (calcareous), mesic*Position on landscape:* Slightly dissected areas on lake plains*Distinctive present vegetation:* Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass**Inclusion 2***Classification:* Typic Torriorthents, fine-silty, carbonatic, mesic*Position on landscape:* Lake plains*Distinctive present vegetation:* Winterfat, Indian ricegrass**Inclusion 3***Classification:* Typic Torriorthents, fine-silty, carbonatic, mesic*Position on landscape:* Lake plains*Distinctive present vegetation:* Shadscale, squirreltail**Inclusion 4***Classification:* Typic Torripsamments, mixed, mesic*Position on landscape:* Dunes on lake plains*Distinctive present vegetation:* Big sagebrush, Indian ricegrass, thickspike wheatgrass**Interpretive Groups***Capability classification:* Nyak and Heist soils—Vlc, nonirrigated*Range site:* Nyak soil—028BY010NV; Heist soil—028BY084NV; Inclusion 1—028BY045NV; Inclusion 2—028BY013NV; Inclusion 3—028BY073NV; Inclusion 4—028BY068NV**951—Nyak-Uwell-Pern association****Map Unit Setting***Position on landscape:* Alluvial flats**Composition***Major components:*

- Nyak clay loam, 0 to 2 percent slopes—45 percent
- Uwell silt loam, 0 to 2 percent slopes—25 percent
- Pern silt loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Pyrat gravelly sandy loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Zimwala silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Cowgil very gravelly sandy loam, 0 to 2 percent slopes—4 percent
- Inclusion 4: Kunzler silt loam, 0 to 2 percent slopes—1 percent

Characteristics of the Nyak Soil*Classification:* Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic*Position on landscape:* Alluvial flats*Parent material:* Mixed alluvium over lacustrine sediments*Slope range:* 0 to 2 percent*Elevation:* 6,100 to 6,300 feet*Dominant present vegetation:* Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass**Climatic Data***Average annual precipitation:* About 10 inches*Average annual air temperature:* About 47 degrees F*Frost-free period:* About 110 days

Typical Profile*Depth:* 0 to 9 inches*Texture:* Clay loam*Structure:* Platy*Consistence:* Slightly hard, firm*Reaction:* Moderately alkaline*Salinity:* Less than 2 mmhos per cm*Depth:* 9 to 14 inches*Texture:* Fine sandy loam*Structure:* Subangular blocky*Consistence:* Hard, firm*Reaction:* Moderately alkaline*Salinity:* Less than 2 mmhos per cm*Depth:* 14 to 60 inches*Texture:* Stratified fine sandy loam to silty clay loam*Structure:* Platy*Consistence:* Hard, firm*Reaction:* Strongly alkaline*Salinity:* Less than 2 mmhos per cm**Soil and Water Features***Depth to a seasonal high water table:* More than 60 inches*Frequency of flooding:* Rare*Permeability:* Moderately slow*Available water capacity:* 7.0 to 8.5 inches*Water-supplying capacity:* 8 to 11 inches*Runoff:* Slow*Hydrologic group:* B*Erosion factors (surface layer):* K value—.28; T value—5; wind erodibility group—4L*Hazard of erosion:* By water—slight; by wind—slight*Shrink-swell potential:* Moderate*Corrosivity:* Steel—high; concrete—high*Potential for frost action:* Moderate**Characteristics of the Uwell Soil***Classification:* Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic*Position on landscape:* Alluvial flats*Parent material:* Mixed alluvium over lacustrine sediments*Slope range:* 0 to 2 percent*Elevation:* 6,100 to 6,300 feet*Dominant present vegetation:* Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass**Climatic Data***Average annual precipitation:* About 8 inches*Average annual air temperature:* About 47 degrees F*Frost-free period:* About 110 days**Typical Profile***Depth:* 0 to 3 inches*Texture:* Silt loam*Structure:* Platy*Consistence:* Slightly hard, very friable*Reaction:* Strongly alkaline*Salinity:* Less than 4 mmhos per cm*Depth:* 3 to 26 inches*Texture:* Silt loam*Structure:* Subangular blocky*Consistence:* Slightly hard, friable*Reaction:* Strongly alkaline*Salinity:* Less than 4 mmhos per cm*Depth:* 26 to 60 inches*Texture:* Silty clay loam*Structure:* Prismatic*Consistence:* Slightly hard, friable*Reaction:* Strongly alkaline*Salinity:* Less than 4 mmhos per cm**Soil and Water Features***Depth to a seasonal high water table:* More than 60 inches*Frequency of flooding:* None*Permeability:* Slow*Available water capacity:* 9.0 to 13.0 inches*Water-supplying capacity:* 8 to 10 inches*Runoff:* Slow*Hydrologic group:* C*Erosion factors (surface layer):* K value—.43; T value—5; wind erodibility group—4L*Hazard of erosion:* By water—slight; by wind—slight*Shrink-swell potential:* Moderate*Corrosivity:* Steel—high; concrete—moderate*Potential for frost action:* Moderate**Characteristics of the Pern Soil***Classification:* Calciorthidic Haploxerolls, fine-silty, mixed, mesic*Position on landscape:* Alluvial flats adjacent to fluvies*Parent material:* Mixed alluvium*Slope range:* 0 to 2 percent*Elevation:* 6,100 to 6,300 feet*Dominant present vegetation:* Basin big sagebrush, basin wildrye**Climatic Data***Average annual precipitation:* About 10 inches*Average annual air temperature:* About 46 degrees F*Frost-free period:* About 110 days

Typical Profile*Depth:* 0 to 14 inches*Texture:* Silt loam*Structure:* Platy*Consistence:* Slightly hard, friable*Reaction:* Moderately alkaline*Salinity:* Less than 2 mmhos per cm*Depth:* 14 to 20 inches*Texture:* Silt loam*Structure:* Subangular blocky*Consistence:* Slightly hard, friable*Reaction:* Moderately alkaline*Salinity:* Less than 2 mmhos per cm*Depth:* 20 to 60 inches*Texture:* Silt loam*Structure:* Massive*Consistence:* Hard, firm*Reaction:* Moderately alkaline*Salinity:* Less than 2 mmhos per cm**Soil and Water Features***Depth to a seasonal high water table:* More than 60 inches*Frequency of flooding:* Rare*Permeability:* Moderate*Available water capacity:* 11.5 to 12.5 inches*Water-supplying capacity:* 12 to 13 inches*Runoff:* Slow*Hydrologic group:* B*Erosion factors (surface layer):* K value—.37; T value—5; wind erodibility group—4L*Hazard of erosion:* By water—slight; by wind—slight*Shrink-swell potential:* Moderate*Corrosivity:* Steel—high; concrete—low*Potential for frost action:* High**Contrasting Inclusions****Inclusion 1***Classification:* Durixerollic Calciorthids, loamy-skeletal, mixed, mesic*Position on landscape:* Offshore bars adjacent to alluvial flats*Distinctive present vegetation:* Wyoming big sagebrush, needleandthread**Inclusion 2***Classification:* Typic Torriorthents, fine-silty, carbonatic, mesic*Position on landscape:* Lake plains adjacent to alluvial flats*Distinctive present vegetation:* Winterfat, Indian ricegrass**Inclusion 3***Classification:* Xerollic Haplargids, loamy-skeletal, mixed, mesic*Position on landscape:* Beach plains adjacent to alluvial flats*Distinctive present vegetation:* Wyoming big sagebrush, needleandthread**Inclusion 4***Classification:* Durixerollic Calciorthids, coarse-loamy, mixed, mesic*Position on landscape:* Lake plains adjacent to alluvial flats*Distinctive present vegetation:* Wyoming big sagebrush, squirreltail, bluegrass**Interpretive Groups***Capability classification:* Pern soil—IIIc, irrigated; Nyak and Pern soils—VIc, Uwell soil—VIIc, nonirrigated*Range site:* Nyak soil—028BY045NV; Uwell soil—028BY045NV; Pern soil—028BY003NV; Inclusion 1—028BY010NV; Inclusion 2—028BY013NV; Inclusion 3—028BY010NV; Inclusion 4—028BY056NV**960—Doten-Bylo-Heist association****Map Unit Setting***Position on landscape:* Lake plains**Composition***Major components:*

- Doten silty clay, 0 to 2 percent slopes—40 percent
- Bylo silt loam, 0 to 2 percent slopes—30 percent
- Heist silt loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Doten silty clay, 0 to 2 percent slopes—6 percent
- Inclusion 2: Zimwala silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Doten silty clay, 0 to 2 percent slopes—2 percent
- Inclusion 4: Orupa silty clay, 0 to 2 percent slopes—2 percent

Characteristics of the Doten Soil*Classification:* Entic Chromoxererts, fine, montmorillonitic, mesic*Position on landscape:* Lake plains*Parent material:* Lacustrine sediments*Slope range:* 0 to 2 percent*Elevation:* 6,300 to 6,400 feet*Dominant present vegetation:* Winterfat, thickspike wheatgrass, western wheatgrass**Climatic Data***Average annual precipitation:* About 9 inches*Average annual air temperature:* About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 5 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 5 to 80 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: Less than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 8.5 to 9.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Very slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—5;
wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Characteristics of the Bylo Soil

Classification: Typic Camborthids, fine-silty, mixed, mesic

Position on landscape: Outer margins of lake plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,300 to 6,400 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 60 inches

Texture: Silty clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 11.0 to 13.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5;
wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed
(calcareous), mesic

Position on landscape: Fan skirts adjacent to lake plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,300 to 6,400 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Entic Chromoxererts, fine, montmorillonitic, mesic

Position on landscape: Lake plains adjacent to fluves

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Distinctive present vegetation: Winterfat, thickspike wheatgrass, western wheatgrass

Inclusion 3

Classification: Entic Chromoxererts, fine, montmorillonitic, mesic

Position on landscape: Lake plains

Distinctive present vegetation: Fourwing saltbush, western wheatgrass

Inclusion 4

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Parna dunes on lake plains

Distinctive present vegetation: Winterfat, thickspike wheatgrass, western wheatgrass

Interpretive Groups

Capability classification: Bylo soil—IIc, irrigated; Doten soil—VIIc, Bylo and Heist soils—VIc, nonirrigated

Range site: Doten soil—028BY071NV; Bylo soil—028BY013NV; Heist soil—028BY084NV; Inclusion 1—028BY013NV; Inclusion 2—028BY071NV; Inclusion 3—028BY023NV; Inclusion 4—028BY071NV

970—Doten association

Map Unit Setting

Position on landscape: Lake plains

Composition

Major components:

- Doten silty clay, 0 to 2 percent slopes—45 percent
- Doten silty clay, moist, 0 to 2 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Katelana silt loam, 0 to 2 percent slopes—7 percent
- Inclusion 2: Doten silty clay, 0 to 2 percent slopes—6 percent
- Inclusion 3: Xeric Torriorthents silty clay loam, 0 to 2 percent slopes—2 percent

Characteristics of the Doten Soil

Classification: Entic Chromoxererts, fine, montmorillonitic, mesic

Position on landscape: Lake plains

Parent material: Lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,300 to 6,400 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 5 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 5 to 80 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: Less than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 8.5 to 9.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—5;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: Low

Characteristics of the Moist Doten Soil

Classification: Entic Chromoxererts, fine, montmorillonitic,
 mesic
Position on landscape: Lake plains
Parent material: Lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 6,300 to 6,400 feet
Dominant present vegetation: Winterfat, thickspike
 wheatgrass, western wheatgrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 5 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 5 to 80 inches
Texture: Silty clay
Structure: Prismatic
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: Less than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 8.5 to 9.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—5;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Typic Torriorthents, fine-silty, carbonatic,
 mesic

Position on landscape: Lake plains

Distinctive present vegetation: Shadscale, squirreltail

Inclusion 2

Classification: Entic Chromoxererts, fine, montmorillonitic,
 mesic

Position on landscape: Lake plains

Distinctive present vegetation: Fourwing saltbush, western
 wheatgrass

Inclusion 3

Classification: Xeric Torriorthents, fine-loamy, mixed
 (calcareous), mesic

Position on landscape: Lake plains adjacent to fluvies

Distinctive present vegetation: Basin big sagebrush, basin
 wildrye

Interpretive Groups

Capability classification: Doten soils—VIIs, nonirrigated

Range site: Doten soil—028BY013NV; the moist Doten
 soil—028BY071NV; Inclusion 1—028BY073NV;
 Inclusion 2—028BY023NV; Inclusion 3—
 028BY003NV

981—Breko-Armespan association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Breko gravelly sandy loam, 0 to 4 percent slopes—60 percent
 - Armespan very gravelly sandy loam, 2 to 4 percent slopes—25 percent
- Contrasting inclusions:*
- Inclusion 1: Nyala sandy loam, 0 to 4 percent slopes—10 percent
 - Inclusion 2: Yody gravelly sandy loam, 0 to 4 percent slopes—3 percent
 - Inclusion 3: Kunzler loam, 0 to 2 percent slopes—2 percent

Characteristics of the Breko Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed,
 mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 9 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 26 inches

Texture: Extremely gravelly sandy clay loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 4.5 inches

Water-supplying capacity: 5 to 6 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.24; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Armespan Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 1 inch

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 1 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 4 to 10 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 10 to 36 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 36 to 60 inches

Texture: Very gravelly loamy coarse sand

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.5 to 4.2 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5;
wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Shadscale, winterfat,
Indian ricegrass, galleta

Inclusion 2

Classification: Haploxerollic Durargids, fine-loamy, mixed,
mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush,
needleandthread

Inclusion 3

Classification: Durixerollic Calciorthids, coarse-loamy,
mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Black greasewood, big
sagebrush, basin wildrye

Interpretive Groups

Capability classification: Breko and Armespan soils—VIIIs,
nonirrigated

Range site: Breko soil—029XY006NV; Armespan soil—
029XY008NV; Inclusion 1—029XY090NV; Inclusion
2—028BY010NV; Inclusion 3—028BY028NV

982—Breko-Yody association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Breko gravelly sandy loam, 2 to 8 percent slopes—50 percent
- Yody gravelly sandy loam, 2 to 4 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Kunzler loam, 2 to 8 percent slopes—5 percent

- Inclusion 2: Palinor gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Palinor very gravelly loam, 8 to 15 percent slopes—1 percent

Characteristics of the Breko Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed,
mesic

Position on landscape: Upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,500 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush,
galleta, Indian ricegrass

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 9 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 26 inches

Texture: Extremely gravelly sandy clay loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 4.5 inches
Water-supplying capacity: 5 to 6 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.24; T value—5;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed,
 mesic
Position on landscape: Lower fan piedmont remnants
Parent material: Alluvium derived from andesite
Slope range: 2 to 4 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Wyoming big sagebrush,
 needleandthread

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Gravelly sandy loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches
Texture: Gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60
 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 5.0 to 6.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2;
 wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Calciorthids, coarse-loamy,
 mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Black greasewood, big
 sagebrush, basin wildrye

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal,
 carbonatic, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Black sagebrush, Indian
 ricegrass, needleandthread

Inclusion 3

Classification: Xerollic Durorthids, loamy-skeletal,
 carbonatic, mesic, shallow
Position on landscape: Side slopes of fan piedmont
 remnants
Distinctive present vegetation: Black sagebrush, Indian
 ricegrass, needleandthread

Interpretive Groups

Capability classification: Yody soil—IIIe, irrigated; Breko
 soil—VIIs, Yody soil—VIs, nonirrigated
Range site: Breko soil—029XY006NV; Yody soil—
 028BY010NV; Inclusion 1—028BY028NV; Inclusion
 2—028BY011NV; Inclusion 3—028BY016NV

990—Blimo-Kunzler-Pern association

Map Unit Setting

Position on landscape: Inset fans and fan terraces

Composition

Major components:

- Blimo gravelly loam, 2 to 4 percent slopes—55 percent
- Kunzler loam, 0 to 2 percent slopes—25 percent

- Pern silt loam, 0 to 2 percent slopes—15 percent
Contrasting inclusion:
- Inclusion 1: Tulase silt loam, 2 to 4 percent slopes—5 percent

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Broad inset fans
Parent material: Mixed alluvium
Slope range: 2 to 4 percent
Elevation: 6,000 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches
Texture: Gravelly sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Very hard, firm
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 4.5 to 7.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Fan terraces
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches
Texture: Loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches
Texture: Loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches
Texture: Sandy loam
Structure: Massive
Consistence: Hard, brittle
Reaction: Very strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 6.5 to 9.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Characteristics of the Pern Soil

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic
Position on landscape: Broad inset fans adjacent to stream channels
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 6,000 to 6,800 feet
Dominant present vegetation: Basin big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 14 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 20 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 20 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: Rare
Permeability: Moderate
Available water capacity: 11.5 to 12.5 inches
Water-supplying capacity: 12 to 13 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low

Potential for frost action: High

Contrasting Inclusion

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Fan skirts adjacent to inset fans
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Pern soil—IIIc, irrigated; Blimo soil—VIs, Kunzler soil—VIIc, Pern soil—VIc, nonirrigated
Range site: Blimo soil—028BY014NV; Kunzler soil—028BY056NV; Pern soil—028BY003NV; Inclusion 1—028BY045NV

991—Blimo-Zerk association

Map Unit Setting

Position on landscape: Alluvial flats

Composition

Major components:

- Blimo gravelly loam, 0 to 2 percent slopes—70 percent
 - Zerk gravelly loam, 0 to 2 percent slopes—15 percent
- Contrasting inclusions:*
- Inclusion 1: Kunzler silt loam, 0 to 2 percent slopes—7 percent
 - Inclusion 2: Sheffit silt loam, 2 to 4 percent slopes—6 percent
 - Inclusion 3: Pern silt loam, 0 to 2 percent slopes—1 percent
 - Inclusion 4: Durorthidic Xeric Torriorthents silt loam, 0 to 2 percent slopes—1 percent

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Alluvial flats
Parent material: Mixed alluvium
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,400 feet
Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.5 to 7.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Zerk Soil

Classification: Duric Calciorthids, sandy-skeletal, mixed, mesic

Position on landscape: Alluvial flats

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,400 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid over rapid

Available water capacity: 3.0 to 4.0 inches

Water-supplying capacity: 5 to 7.5 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions**Inclusion 1**

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Alluvial flats

Distinctive present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Inclusion 2

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Alluvial flats

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 3

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Alluvial flats adjacent to fluves
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, sandy-skeletal, mixed (calcareous), mesic
Position on landscape: Alluvial flats
Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Zerk soil—IVs, irrigated; Blimo soil—VIs, Zerk soil—VIIs, nonirrigated
Range site: Blimo soil—028BY014NV; Zerk soil—028BY084NV; Inclusion 1—028BY056NV; Inclusion 2—028BY028NV; Inclusion 3—028BY003NV; Inclusion 4—028BY013NV

992—Blimo-Linoyer-Tulase association

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major components:

- Blimo gravelly loam, 2 to 4 percent slopes—55 percent
- Linoyer very fine sandy loam, 2 to 4 percent slopes—15 percent
- Tulase silt loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Kunzler silt loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Pyrat gravelly sandy loam, 2 to 4 percent slopes—3 percent
- Inclusion 3: Shabliss gravelly loam, 2 to 4 percent slopes—2 percent

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Fan skirts adjacent to alluvial flats
Parent material: Mixed alluvium
Slope range: 2 to 4 percent
Elevation: 5,800 to 6,400 feet
Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches
Texture: Gravelly sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Very hard, firm
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 4.5 to 7.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Fan skirts
Parent material: Mixed alluvium
Slope range: 2 to 4 percent
Elevation: 5,800 to 6,400 feet
Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches
Texture: Very fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches
Texture: Silt loam
Structure: Prismatic
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 11.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Low

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Fan skirts adjacent to fluvies
Parent material: Silty alluvium derived from mixed rocks and some volcanic ash
Slope range: 2 to 4 percent
Elevation: 5,800 to 6,400 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Alluvial flats adjacent to fan skirts
Distinctive present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Inset fans adjacent to fan skirts
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants adjacent to fan skirts
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Linoyer soil—IIIe, Tulase soil—Ile, irrigated; Blimo soil—VIs, Linoyer soil—VIe, Tulase soil—VIc, nonirrigated
Range site: Blimo soil—028BY014NV; Linoyer soil—028BY013NV; Tulase soil—028BY045NV; Inclusion

1—028BY056NV; Inclusion 2—028BY010NV;
Inclusion 3—028BY080NV

1000—Linoyer-Unsel association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Linoyer silt loam, 2 to 4 percent slopes—55 percent
- Unsel gravelly fine sandy loam, 2 to 4 percent slopes—40 percent

Contrasting inclusion:

- Inclusion 1: Heist silt loam, 2 to 4 percent slopes—5 percent

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,400 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 11.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Unsel Soil

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,400 feet

Dominant present vegetation: Shadscale, winterfat, Indian ricegrass, galleta

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 4 inches

Texture: Gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 14 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 22 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, brittle

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches

Texture: Very gravelly loamy sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 3.0 to 5.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.20; T value—3; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Contrasting Inclusion

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Linoyer and Unsel soils—IIIe, irrigated; Linoyer soil—VIe, Unsel soil—VIIc, nonirrigated
Range site: Linoyer soil—028BY013NV; Unsel soil—029XY090NV; Inclusion 1—028BY084NV

1010—Hunnton-Chiara association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Hunnton silt loam, 2 to 8 percent slopes—50 percent
- Chiara silt loam, 2 to 8 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Durixerollic Camborthids gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Wieland silt loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Dewar gravelly silt loam, 2 to 8 percent slopes—5 percent

Characteristics of the Hunnton Soil

Classification: Xerollic Durargids, fine, montmorillonitic, mesic

Position on landscape: Slightly concave summits of fan piedmont remnants

Parent material: Mixed alluvium and some loess and volcanic ash

Slope range: 2 to 8 percent

Elevation: 5,800 to 6,500 feet

Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 10 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 10 to 35 inches

Texture: Clay

Structure: Prismatic parting to angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 35 to 40 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.0 to 6.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—2; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Chiara Soil

Classification: Xerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Slightly convex summits of fan piedmont remnants
Parent material: Loess mantle high in content of volcanic ash over mixed alluvium
Slope range: 2 to 8 percent
Elevation: 5,800 to 6,500 feet
Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Silt loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 19 inches
Texture: Indurated duripan

Soil and Water Features

Depth to a hardpan: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 3.5 to 4.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.55; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Camborthids, fine-loamy, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Inclusion 2

Classification: Durixerollic Haplargids, fine, montmorillonitic, mesic
Position on landscape: Slightly concave summits of fan piedmont remnants
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Inclusion 3

Classification: Xerollic Durargids, loamy, mixed, mesic, shallow
Position on landscape: Slightly convex summits of fan piedmont remnants
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Interpretive Groups

Capability classification: Chiara soil—IVe, irrigated; Hunnonton soil—VIs, Chiara soil—VIIs, nonirrigated
Range site: Hunnonton soil—025XY019NV; Chiara soil—025XY019NV; Inclusion 1—025XY019NV; Inclusion 2—025XY019NV; Inclusion 3—025XY019NV

1012—Hunnonton-Wieland-Kelk association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Hunnonton silt loam, 2 to 8 percent slopes—40 percent
- Wieland silt loam, 4 to 15 percent slopes—30 percent
- Kelk very fine sandy loam, 0 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Chiara silt loam, 2 to 8 percent slopes—7 percent
- Inclusion 2: Durixerollic Haplargids gravelly loam, 2 to 15 percent slopes—3 percent

- Inclusion 3: Xerollic Durorthids gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Sonoma silt loam, 0 to 4 percent slopes—2 percent

Characteristics of the Hunnton Soil

Classification: Xerollic Durargids, fine, montmorillonitic, mesic

Position on landscape: Summits of fan piedmont remnants

Parent material: Mixed alluvium and some loess and volcanic ash

Slope range: 2 to 8 percent

Elevation: 5,900 to 6,000 feet

Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 10 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 10 to 35 inches

Texture: Clay

Structure: Prismatic parting to angular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 35 to 40 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.0 to 6.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—2; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Wieland Soil

Classification: Durixerollic Haplargids, fine, montmorillonitic, mesic

Position on landscape: Side slopes of fan piedmont remnants

Parent material: Mixed alluvium and some loess and volcanic ash

Slope range: 4 to 15 percent

Elevation: 5,900 to 6,000 feet

Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 10 percent

Depth: 0 to 8 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 17 inches

Texture: Gravelly clay

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 17 to 30 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: Less than 8 mmhos per cm

Depth: 30 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 6.0 to 10.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—5
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Kelk Soil

Classification: Durixerollic Camborthids, fine-silty, mixed, mesic
Position on landscape: Inset fans
Parent material: Loess and some volcanic ash and mixed silty alluvium
Slope range: 0 to 4 percent
Elevation: 5,900 to 6,000 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Very fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 4 to 32 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 8 mmhos per cm

Depth: 32 to 60 inches
Texture: Silt loam
Structure: Massive

Consistence: Slightly hard, firm
Reaction: Strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 11.0 to 12.0 inches
Water-supplying capacity: 7 to 10 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Slightly convex summits of fan piedmont remnants
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Inclusion 2

Classification: Durixerollic Haplargids, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Inclusion 3

Classification: Xerollic Durorthids, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Inclusion 4

Classification: Aeris Fluvaquents, fine-silty, mixed (calcareous), mesic
Position on landscape: Axial-stream flood plains adjacent to fan piedmont remnants
Distinctive present vegetation: Basin wildrye, basin big sagebrush, Nevada bluegrass

Interpretive Groups

Capability classification: Hunnonton, Wieland, and Kelk soils—VIs, nonirrigated

Range site: Hunnton soil—025XY019NV; Wieland soil—025XY019NV; Kelk soil—028BY045NV; Inclusion 1—025XY019NV; Inclusion 2—025XY019NV; Inclusion 3—025XY019NV; Inclusion 4—025XY003NV

1020—Sonoma-Kelk association

Map Unit Setting

Position on landscape: Axial-stream flood plains

Composition

Major components:

- Sonoma silt loam, 0 to 2 percent slopes—45 percent
- Kelk very fine sandy loam, 0 to 2 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Aeris Halaquepts silty clay loam, 0 to 2 percent slopes—8 percent
- Inclusion 2: Durixerollic Camborthids gravelly loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Cumulic Haplaquolls silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Sonoma Soil

Classification: Aeris Fluvaquents, fine-silty, mixed (calcareous), mesic

Position on landscape: Axial-stream flood plains in areas of stream channel entrenchment

Parent material: Mixed silty alluvium and some volcanic ash

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,000 feet

Dominant present vegetation: Basin wildrye, basin big sagebrush, Nevada bluegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 10 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 10 to 60 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Very slow

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: High

Characteristics of the Kelk Soil

Classification: Durixerollic Camborthids, fine-silty, mixed, mesic

Position on landscape: Axial-stream flood plains adjacent to stream channels

Parent material: Loess and some volcanic ash and mixed silty alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,000 feet

Dominant present vegetation: Basin wildrye, western wheatgrass, basin big sagebrush, black greasewood

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 32 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 8 mmhos per cm

Depth: 32 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Slightly hard, firm

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: Rare

Permeability: Slow

Available water capacity: 11.0 to 12.0 inches

Water-supplying capacity: 7 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aerlic Halaquepts, fine-silty, mixed (calcareous), mesic

Position on landscape: Outer margins of axial-stream flood plains

Distinctive present vegetation: Basin wildrye, alkali sacaton, inland saltgrass, black greasewood

Inclusion 2

Classification: Durixerollic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Outer margins of axial-stream flood plains

Distinctive present vegetation: Basin wildrye, western wheatgrass, basin big sagebrush, black greasewood

Inclusion 3

Classification: Cumulic Haplaquolls, fine, montmorillonitic (calcareous), mesic

Position on landscape: Axial-stream flood plains adjacent to stream channels

Distinctive present vegetation: Bluegrass, sedge, rush

Interpretive Groups

Capability classification: Sonoma soil—IIw, Kelk soil—IIs, irrigated; Sonoma soil—VIIw, Kelk soil—VIs, nonirrigated

Range site: Sonoma soil—025XY003NV; Kelk soil—024XY006NV; Inclusion 1—024XY007NV; Inclusion 2—024XY006NV; Inclusion 3—028BY001NV

1030—Chiara silt loam, 2 to 15 percent slopes

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major component:

- Chiara silt loam, 2 to 15 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Durorthids gravelly loam, 4 to 15 percent slopes—7 percent
- Inclusion 2: Durixerollic Camborthids gravelly loam, 2 to 8 percent slopes—6 percent
- Inclusion 3: Dewar gravelly silt loam, 2 to 8 percent slopes—2 percent

Characteristics of the Chiara Soil

Classification: Xerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Loess mantle high in content of volcanic ash over mixed alluvium

Slope range: 2 to 15 percent

Elevation: 5,900 to 6,000 feet

Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 19 inches

Texture: Indurated duripan

Soil and Water Features

Depth to a hardpan: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 3.5 to 4.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.55; T value—1; wind erodibility group—5
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Durixerollic Camborthids, coarse-loamy, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Inclusion 3

Classification: Xerollic Durargids, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Interpretive Groups

Capability classification: Chiara soil—IVe, irrigated, VIIs, nonirrigated
Range site: Chiara soil—025XY019NV; Inclusion 1—028BY010NV; Inclusion 2—025XY019NV; Inclusion 3—025XY019NV

1032—Chiara-Kelk association

Map Unit Setting

Position on landscape: Fan piedmonts and axial-stream flood plains

Composition

Major components:

- Chiara silt loam, 2 to 4 percent slopes—50 percent
- Kelk very fine sandy loam, 2 to 8 percent slopes—20 percent
- Kelk very fine sandy loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Puett gravelly loam, 8 to 30 percent slopes—10 percent
- Inclusion 2: Xerollic Camborthids very gravelly loam, 4 to 15 percent slopes—3 percent
- Inclusion 3: Xerollic Durargids, 2 to 4 percent slopes—2 percent

Characteristics of the Chiara Soil

Classification: Xerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Loess mantle high in content of volcanic ash over mixed alluvium

Slope range: 2 to 4 percent

Elevation: 5,900 to 6,000 feet

Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 19 inches

Texture: Indurated duripan

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None
Permeability: Moderate
Available water capacity: 3.5 to 4.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.55; T value—1;
 wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the More Sloping Kelk Soil

Classification: Durixerollic Camborthids, fine-silty, mixed, mesic
Position on landscape: Inset fans
Parent material: Loess and some volcanic ash and mixed silty alluvium
Slope range: 2 to 8 percent
Elevation: 5,900 to 6,000 feet
Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Very fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 4 to 32 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 8 mmhos per cm

Depth: 32 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Slightly hard, firm
Reaction: Strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None
Permeability: Slow
Available water capacity: 11.0 to 12.0 inches
Water-supplying capacity: 7 to 10 inches
Runoff: Slow
Hydrologic group: C
Erosion factors (surface layer): K value—.49; T value—5;
 wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Nearly Level Kelk Soil

Classification: Durixerollic Camborthids, fine-silty, mixed, mesic
Position on landscape: Axial-stream flood plains
Parent material: Loess and some volcanic ash and mixed silty alluvium
Slope range: 0 to 2 percent
Elevation: 5,900 to 6,000 feet
Dominant present vegetation: Basin wildrye, western wheatgrass, basin big sagebrush, black greasewood

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Very fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 4 to 32 inches
Texture: Silt loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 8 mmhos per cm

Depth: 32 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Slightly hard, firm
Reaction: Strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: Rare

Permeability: Slow

Available water capacity: 11.0 to 12.0 inches

Water-supplying capacity: 7 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—5;
wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, loamy, mixed
(calcareous), mesic, shallow

Position on landscape: Side slopes of fan piedmont
remnants that have a rock core

Distinctive present vegetation: Bluebunch wheatgrass,
Thurber needlegrass, basin wildrye, Wyoming big
sagebrush

Inclusion 2

Classification: Xerollic Camborthids, coarse-loamy over
sandy or sandy-skeletal, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Bluebunch wheatgrass,
Thurber needlegrass, basin wildrye, Wyoming big
sagebrush

Inclusion 3

Classification: Xerollic Durargids

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Bluebunch wheatgrass,
Thurber needlegrass, basin wildrye, Wyoming big
sagebrush

Interpretive Groups

Capability classification: Chiara soil—I_{Ve}, the more
sloping Kelk soil—I_{Is}, irrigated; Chiara soil—V_{IIs}, Kelk
soils—V_{Is}, nonirrigated

Range site: Chiara soil—025XY019NV; the more sloping
Kelk soil—025XY019NV; the nearly level Kelk soil—
024XY006NV; Inclusion 1—025XY019NV; Inclusion
2—025XY019NV; Inclusion 3—025XY019NV

1050—Yody-Dewar association, cool

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Yody gravelly sandy loam, 2 to 8 percent slopes—50 percent

- Dewar gravelly silt loam, 2 to 8 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Chiara silt loam, 2 to 8 percent slopes—8 percent

- Inclusion 2: Xerollic Camborthids very gravelly loam, 0 to 4 percent slopes—5 percent

- Inclusion 3: Parisa gravelly loam, 2 to 8 percent slopes—2 percent

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed,
mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Bluebunch wheatgrass,
Thurber needlegrass, basin wildrye, Wyoming big
sagebrush

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 5.0 to 6.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Dewar Soil

Classification: Xerollic Durargids, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Parent material: Loess, mixed silty alluvium, and some volcanic ash
Slope range: 2 to 8 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 5 percent
Depth: 0 to 3 inches
Texture: Gravelly silt loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 3 to 12 inches
Texture: Gravelly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 12 to 18 inches
Texture: Gravelly silt loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 8 mmhos per cm

Depth: 18 to 60 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Soil and Water Features

Depth to a hardpan: 13 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 3.0 inches
Water-supplying capacity: 6 to 9 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.37; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Slightly convex summits of fan piedmont remnants
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Inclusion 2

Classification: Xerollic Camborthids, loamy-skeletal, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 3

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Interpretive Groups

Capability classification: Yody soil—IIIe, irrigated; Yody soil—VIs, Dewar soil—VIIIs, nonirrigated

Range site: Yody soil—025XY019NV; Dewar soil—025XY019NV; Inclusion 1—025XY019NV; Inclusion 2—028BY003NV; Inclusion 3—025XY019NV

1081—Bobs-Fax-Parisa association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Bobs very gravelly loam, 2 to 15 percent slopes—40 percent
- Fax very cobbly coarse sandy loam, 4 to 15 percent slopes—25 percent
- Parisa gravelly loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Orthidic Durixerolls gravelly loam, 4 to 15 percent slopes—4 percent
- Inclusion 2: Aridic Durixerolls gravelly loam, 4 to 15 percent slopes—4 percent
- Inclusion 3: Shabliss gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 4: Tulase silt loam, 0 to 4 percent slopes—3 percent

Characteristics of the Bobs Soil

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow

Position on landscape: Upper fan piedmont remnants

Parent material: Alluvium derived from limestone and some loess high in content of ash

Slope range: 2 to 15 percent

Elevation: 6,800 to 7,200 feet

Dominant present vegetation: Big sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Indurated petrocalcic material

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 7 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Fax Soil

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 4 to 15 percent

Elevation: 6,800 to 7,200 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 15 percent

Depth: 0 to 3 inches

Texture: Very cobbly coarse sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 to 22 inches
Texture: Very gravelly sandy clay loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 22 to 48 inches
Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 20 to 36 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 11 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Parisa Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: Lower fan piedmont remnants
Parent material: Alluvium derived from limestone and dolomite
Slope range: 2 to 8 percent
Elevation: 6,500 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 35 percent
Depth: 0 to 4 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 26 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 26 to 47 inches
Texture: Indurated duripan

Depth: 47 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 3.0 inches
Water-supplying capacity: 5.5 to 8.5 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Orthidic Durixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 2

Classification: Aridic Durixerolls, fine-loamy, mixed, frigid
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 3

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Lower fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Bobs, Fax, and Parisa soils—Vlls, nonirrigated

Range site: Bobs soil—028BY094NV; Fax soil—028BY007NV; Parisa soil—028BY010NV; Inclusion 1—028BY007NV; Inclusion 2—028BY007NV; Inclusion 3—028BY080NV; Inclusion 4—028BY045NV

1090—Fax-Hunnton-Cassiro association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Fax very cobbly coarse sandy loam, 8 to 30 percent slopes—30 percent
- Hunnton silt loam, 4 to 15 percent slopes—25 percent
- Cassiro stony loam, 8 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Aridic Durixerolls gravelly loam, 8 to 30 percent slopes—10 percent
- Inclusion 2: Xerollic Camborthids very gravelly loam, 2 to 8 percent slopes—7 percent
- Inclusion 3: Typic Argixerolls gravelly silt loam, 4 to 15 percent slopes—5 percent
- Inclusion 4: Cumulic Haplaquolls silt loam, 2 to 8 percent slopes—3 percent

Characteristics of the Fax Soil

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Summits of the upper, convex fan piedmont remnants

Parent material: Alluvium derived from andesite and quartzite

Slope range: 8 to 30 percent

Elevation: 6,400 to 6,800 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 15 percent

Depth: 0 to 3 inches

Texture: Very cobbly coarse sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 22 inches

Texture: Very gravelly sandy clay loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 22 to 48 inches

Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 20 to 36 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hunnton Soil

Classification: Xerollic Durargids, fine, montmorillonitic, mesic

Position on landscape: Summits of the lower fan piedmont remnants

Parent material: Mixed alluvium and some loess and volcanic ash

Slope range: 4 to 15 percent

Elevation: 6,200 to 6,400 feet

Dominant present vegetation: Bluebunch wheatgrass, Thurber needlegrass, basin wildrye, Wyoming big sagebrush

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Silt loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 4 to 10 inches
Texture: Silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 4 mmhos per cm

Depth: 10 to 35 inches
Texture: Clay
Structure: Prismatic parting to angular blocky
Consistence: Hard, firm
Reaction: Mildly alkaline
Salinity: Less than 4 mmhos per cm

Depth: 35 to 40 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 4.0 to 6.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.49; T value—2; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Cassiro Soil

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: Summits of the upper, slightly concave fan piedmont remnants
Parent material: Mixed alluvium

Slope range: 8 to 30 percent
Elevation: 6,400 to 6,800 feet
Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 10 percent

Depth: 0 to 5 inches
Texture: Stony loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 5 to 60 inches
Texture: Very gravelly clay
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 3.5 to 4.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Low

Contrasting Inclusions**Inclusion 1**

Classification: Aridic Durixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: Upper fan piedmont remnants

Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 2

Classification: Xerollic Camborthids, fine-silty, mixed, mesic

Position on landscape: Inset fans
Distinctive present vegetation: Basin wildrye, basin big sagebrush, Nevada bluegrass

Inclusion 3

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: Summits of convex, upper fan piedmont remnants adjacent to mountains
Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 4

Classification: Cumulic Haplaquolls, loamy-skeletal, mixed, mesic
Position on landscape: Areas adjacent to springs and seeps
Distinctive present vegetation: Bluegrass, sedge, rush

Interpretive Groups

Capability classification: Fax and Cassiro soils—VIIIs, Hunnion soil—VIs, nonirrigated
Range site: Fax soil—028BY007NV; Hunnion soil—025XY019NV; Cassiro soil—028BY007NV; Inclusion 1—028BY007NV; Inclusion 2—025XY003NV; Inclusion 3—028BY037NV; Inclusion 4—028BY001NV

1120—Kunzler-Sycomat association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Kunzler loam, 0 to 4 percent slopes—55 percent
- Sycomat sandy loam, 0 to 2 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Hessing silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Pyrat gravelly sandy loam, 0 to 4 percent slopes—5 percent
- Inclusion 3: Typic Torriorthents sandy loam, 0 to 2 percent slopes—3 percent
- Inclusion 4: Xeric Torriorthents silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium
Slope range: 0 to 4 percent

Elevation: 5,400 to 6,200 feet
Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent
Depth: 0 to 10 inches
Texture: Loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches
Texture: Loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Very strongly alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches
Texture: Sandy loam
Structure: Massive
Consistence: Hard, brittle
Reaction: Very strongly alkaline
Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 6.5 to 9.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Moderate

Characteristics of the Sycomat Soil

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,400 to 6,200 feet

Dominant present vegetation: Shadscale, black greasewood, squirreltail

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 100 days

Typical Profile

Depth: 0 to 4 inches

Texture: Sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 15 inches

Texture: Sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 15 to 44 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, brittle

Reaction: Very strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 44 to 60 inches

Texture: Stratified sandy loam to sand

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 3.5 to 4.5 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.24; T value—5
wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Typic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Convex summits of fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Typic Torriorthents, fine, montmorillonitic, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Inclusion 4

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Black greasewood, basin wildrye, inland saltgrass

Interpretive Groups

Capability classification: Kunzler and Sycomat soils—VIIc, nonirrigated

Range site: Kunzler soil—028BY028NV; Sycomat soil—028BY074NV; Inclusion 1—028BY017NV; Inclusion 2—028BY010NV; Inclusion 3—028BY074NV; Inclusion 4—028BY069NV

1122—Kunzler-Pern association

Map Unit Setting

Position on landscape: Inset fans

Composition

Major components:

- Kunzler loam, 0 to 4 percent slopes—55 percent
- Pern silt loam, 0 to 2 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Duffer silt loam, 0 to 4 percent slopes—6 percent
- Inclusion 2: Tulase silt loam, 0 to 4 percent slopes—4 percent
- Inclusion 3: Devilsgait silt loam, 0 to 2 percent slopes—3 percent

- Inclusion 4: Sycomat sandy loam, 0 to 4 percent slopes—2 percent

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Outer margins of inset fans

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches

Texture: Loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, brittle

Reaction: Very strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.5 to 9.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Pern Soil

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Inset fans adjacent to stream channels

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Basin big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 14 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 20 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 20 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: Rare

Permeability: Moderate

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 12 to 13 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Axial-stream flood plains adjacent to inset fans

Distinctive present vegetation: Black greasewood, basin wildrye, alkali sacaton

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans on the upper part of the unit

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Axial-stream flood plains adjacent to inset fans

Distinctive present vegetation: Basin wildrye, creeping wildrye

Inclusion 4

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Outer margins of inset fans

Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Interpretive Groups

Capability classification: Pern soil—IIIc, irrigated; Kunzler soil—VIIc, Pern soil—VIc, nonirrigated

Range site: Kunzler soil—028BY028NV; Pern soil—028BY041NV; Inclusion 1—028BY004NV; Inclusion 2—028BY045NV; Inclusion 3—028BY081NV; Inclusion 4—028BY074NV

1130—Duffer-Equis association

Map Unit Setting

Position on landscape: Flood plains

Composition

Major components:

- Duffer silt loam, moist, 0 to 2 percent slopes—40 percent
- Duffer silt loam, 0 to 2 percent slopes—35 percent
- Equis silty clay, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Typic Haplaquolls silty clay loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Kunzler loam, 0 to 4 percent slopes—2 percent
- Inclusion 3: Aquic Calciorthids silt loam, 0 to 2 percent slopes—2 percent
- Inclusion 4: Xeric Torriorthents silt loam, 0 to 2 percent slopes—1 percent

Characteristics of the Moist Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Flood plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,400 to 6,200 feet

Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 18 to 36 inches

Flooding: Occasional, for very brief periods, from January through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Characteristics of the Duffer Soil

Classification: Aquic Calciorrhids, fine-silty, carbonatic, mesic

Position on landscape: Outer margins of flood plains and areas of stream channel entrenchment

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,400 to 6,200 feet

Dominant present vegetation: Black greasewood, basin wildrye, alkali sacaton

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 36 to 60 inches

Frequency of flooding: Rare

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Characteristics of the Equis Soil

Classification: Typic Halaquepts, fine, carbonatic, mesic

Position on landscape: Higher areas on flood plains; adjacent to areas of springs and seeps

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,400 to 6,200 feet

Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 6 to 30 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Sodicity: SAR 40 to 70

Depth: 30 to 50 inches

Texture: Silty clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Sodicity: SAR less than 5

Depth: 50 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Sodicity: SAR less than 5

Soil and Water Features

Depth to a seasonal high water table: 12 to 36 inches

Frequency of flooding: Rare

Permeability: Very slow

Available water capacity: 8.5 to 12.5 inches

Water-supplying capacity: 9 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Haplaquolls, fine, montmorillonitic (calcareous), mesic

Position on landscape: Flood plains adjacent to stream channels

Distinctive present vegetation: Bluegrass, sedge, rush

Inclusion 2

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts adjacent to flood plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 3

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Flood plains

Distinctive present vegetation: Alkalai sacaton, inland saltgrass, rush, basin wildrye

Inclusion 4

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Alluvial flats adjacent to flood plains

Distinctive present vegetation: Black greasewood, basin wildrye, inland saltgrass

Interpretive Groups

Capability classification: Duffer soils—IVw, irrigated; the moist Duffer soil—VIIw, Duffer and Equis soils—VIw, nonirrigated

Range site: The moist Duffer soil—028BY002NV; Duffer soil—028BY004NV; Equis soil—028BY002NV; Inclusion 1—028BY001NV; Inclusion 2—028BY028NV; Inclusion 3—029XY004NV; Inclusion 4—028BY069NV

1131—Duffer-Devilsgait association

Map Unit Setting

Position on landscape: Flood plains

Composition

Major components:

- Duffer silt loam, moist, 0 to 2 percent slopes—40 percent
- Devilsgait silt loam, 0 to 2 percent slopes—30 percent
- Duffer silt loam, 0 to 2 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents silt loam, 0 to 2 percent slopes—10 percent

- Inclusion 2: Xeric Torriorthents silt loam, 0 to 2 percent slopes—5 percent

Characteristics of the Moist Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Flood plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 18 to 36 inches

Flooding: Occasional, for very brief periods, from March through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Characteristics of the Devilsgait Soil

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic

Position on landscape: Flood plains adjacent to stream channels

Parent material: Mixed silty alluvium and some loess and ash

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Bluegrass, sedge, rush

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 10 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 60 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 0 to 18 inches

Flooding: Frequent, for long periods, from March through June

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 10 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: High

Characteristics of the Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Flood plains in areas of stream channel entrenchment

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,200 feet

Dominant present vegetation: Black greasewood, basin wildrye, alkali sacaton

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 36 to 60 inches

Frequency of flooding: Rare

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Alluvial flats adjacent to flood plains

Distinctive present vegetation: Black greasewood, basin wildrye, inland saltgrass

Inclusion 2

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Alluvial flats adjacent to flood plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Duffer soils—IVw, Devilsgait soil—Vw, irrigated; the moist Duffer soil—VIIw, Devilsgait and Duffer soils—VIw, nonirrigated

Range site: The moist Duffer soil—028BY002NV;

Devilsgait soil—028BY001NV; Duffer soil—028BY004NV; Inclusion 1—028BY069NV; Inclusion 2—028BY028NV

1132—Duffer silt loam, rarely flooded, 0 to 2 percent slopes

Map Unit Setting

Position on landscape: Alluvial flats

Composition

Major component:

- Duffer silt loam, 0 to 2 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Duffer silt loam, 0 to 2 percent slopes—7 percent
- Inclusion 2: Kunzler loam, 0 to 2 percent slopes—4 percent
- Inclusion 3: Sycomat sandy loam, 0 to 4 percent slopes—3 percent
- Inclusion 4: Kolda silt loam, 0 to 2 percent slopes—1 percent

Characteristics of the Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Alluvial flats

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Black greasewood, basin wildrye, alkali sacaton

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 36 to 60 inches

Frequency of flooding: Rare

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Flood plains adjacent to alluvial flats

Distinctive present vegetation: Alkali sacaton, alkali cordgrass

Inclusion 2

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts adjacent to alluvial flats

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 3

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts adjacent to alluvial flats

Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Inclusion 4

Classification: Typic Haplaquolls, fine, montmorillonitic (calcareous), mesic

Position on landscape: Alluvial flats adjacent to springs and seeps

Distinctive present vegetation: Bluegrass, sedge, rush

Interpretive Groups

Capability classification: Duffer soil—IVw, irrigated, VIw, nonirrigated

Range site: Duffer soil—028BY004NV; Inclusion 1—028BY002NV; Inclusion 2—028BY028NV; Inclusion 3—028BY074NV; Inclusion 4—028BY001NV

1141—Shabliss-Pyrat association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Shabliss gravelly loam, 2 to 4 percent slopes—70 percent
- Pyrat gravelly sandy loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Palinor gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 2: Tulase silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 3: Blimo gravelly loam, 0 to 2 percent slopes—2 percent
- Inclusion 4: Kunzler loam, 2 to 4 percent slopes—1 percent

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash

Slope range: 2 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 5.5 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Inset fans

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans and adjacent fan skirts

Distinctive present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Inclusion 4

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts above flood plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Shabliss and Pyrat soils—VIIIs, nonirrigated

Range site: Shabliss soil—028BY080NV; Pyrat soil—028BY010NV; Inclusion 1—028BY011NV; Inclusion 2—028BY045NV; Inclusion 3—028BY014NV; Inclusion 4—028BY028NV

1151—Zimbob-Rock outcrop association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Zimbob very gravelly loam, 4 to 15 percent slopes—50 percent
 - Zimbob very gravelly loam, 15 to 50 percent slopes—25 percent
 - Rock outcrop—10 percent
- Contrasting inclusions:*
- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—4 percent
 - Inclusion 2: Zimbob very gravelly loam, 8 to 30 percent slopes—4 percent
 - Inclusion 3: Haarvar gravelly clay loam, 4 to 15 percent slopes—4 percent
 - Inclusion 4: Tulase silt loam, 2 to 8 percent slopes—3 percent

Characteristics of the Less Sloping Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests and side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 45 degrees F
Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 7 to 10 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Steep Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic
Position on landscape: Crests and side slopes of hills
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 6,000 to 6,800 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F
Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 7 to 10 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests of hills
Kind of rock: Limestone and dolomite

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Drainageways on hills
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic
Position on landscape: Crests and side slopes of hills

Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow

Position on landscape: Lower side slopes of hills

Distinctive present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Drainageways on hills

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Zimbob soils—VIIIs, nonirrigated; Rock outcrop—VIIIIs

Range site: The less sloping Zimbob soil—028BY016NV; the steep Zimbob soil—028BY016NV; Rock outcrop—none; Inclusion 1—028BY084NV; Inclusion 2—028BY059NV; Inclusion 3—029XY014NV; Inclusion 4—028BY045NV

1152—Zimbob-Eaglepass association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Zimbob very gravelly loam, 15 to 50 percent slopes—35 percent
- Zimbob very gravelly loam, very shallow, 15 to 50 percent slopes—30 percent
- Eaglepass extremely stony loam, 30 to 75 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—8 percent
- Inclusion 2: Lithic Xeric Torriorthents very gravelly loam, 15 to 50 percent slopes—3 percent
- Inclusion 3: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Xeric Torriorthents gravelly sandy loam, 15 to 50 percent slopes—2 percent

Characteristics of the Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests and side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 7 to 10 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Very Shallow Zimbob Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Crests and side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Utah juniper, black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Cobbles, 15 percent; pebbles, 75 percent

Depth: 0 to 1 inch

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 4 to 10 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 7 to 10 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Eaglepass Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Littleleaf mountainmahogany, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 15 percent; pebbles, 40 percent

Depth: 0 to 1 inch

Texture: Extremely stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 4 inches

Texture: Extremely stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 4 to 6 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 4 to 5 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of hills

Distinctive present vegetation: None

Inclusion 2

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of hills

Distinctive present vegetation: Galleta, shadscale, Nevada ephedra, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Drainageways on hills

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of hills

Distinctive present vegetation: Shadscale, galleta, Bailey greasewood, bud sagebrush

Interpretive Groups

Capability classification: Zimbob soils and Eaglepass soil—VIIIs, nonirrigated

Range site: Zimbob soil—028BY016NV; the very shallow Zimbob soil—028BY059NV; Eaglepass soil—029XY040NV; Inclusion 1—none; Inclusion 2—029XY028NV; Inclusion 3—028BY010NV; Inclusion 4—029XY017NV

1171—Haunchee-Hardol-Halacan association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Haunchee very gravelly loam, 15 to 50 percent slopes—45 percent
- Hardol very gravelly silt loam, 15 to 50 percent slopes—30 percent
- Halacan very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—5 percent
- Inclusion 2: Xine very gravelly loam, 8 to 30 percent slopes—3 percent
- Inclusion 3: Cavehill very gravelly silt loam, 15 to 50 percent slopes—2 percent

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hardol Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Concave side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, needlegrass

Climatic Data

Average annual precipitation: About 20 inches

Average annual air temperature: About 40 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 20 percent; pebbles, 20 percent

Depth: 0 to 12 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 33 inches

Texture: Extremely gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 33 to 60 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 11 to 14 inches

Runoff: Rapid

Hydrologic group: B

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Halacan Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Crests and upper, convex side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 9,000 to 10,000 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 38 degrees F

Frost-free period: About 40 days

Typical Profile

Surface cover: Flagstones, 10 percent; channers, 60 percent

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 19 inches

Texture: Very channery loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Lower, concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Haunchee, Hardol, and Halacan soils—VIIIs, nonirrigated

Range site: Haunchee soil—028BY043NV; Hardol soil—028BY085NV; Halacan soil—028BY048NV; Inclusion 1—none; Inclusion 2—028BY079NV; Inclusion 3—028BY062NV

1173—Haunchee-Hardol-Rock outcrop association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Haunchee very cobbly loam, 30 to 50 percent slopes—50 percent
- Hardol very gravelly silt loam, 15 to 50 percent slopes—25 percent
- Rock outcrop—10 percent

Contrasting inclusions:

- Inclusion 1: Hardzem channery loam, 30 to 75 percent slopes—6 percent
- Inclusion 2: Wardbay very gravelly loam, 30 to 50 percent slopes—8 percent
- Inclusion 3: Pachic Cryoborolls gravelly silt loam, 15 to 50 percent slopes—1 percent

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum derived from limestone and dolomite

Slope range: 30 to 50 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hardol Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Concave side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Curleaf

mountainmahogany, mountain big sagebrush,
bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 20 inches
Average annual air temperature: About 40 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 20 percent; pebbles, 20 percent

Depth: 0 to 12 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 to 33 inches
Texture: Extremely gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 33 to 60 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 5.0 inches
Water-supplying capacity: 11 to 14 inches
Runoff: Rapid
Hydrologic group: B
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of mountains
Kind of rock: Limestone and dolomite

Contrasting Inclusions

Inclusion 1

Classification: Typic Cryoboralfs, loamy-skeletal, mixed
Position on landscape: Upper, north-facing side slopes of mountains
Distinctive present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Inclusion 2

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: Side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Pachic Cryoborolls, loamy-skeletal, mixed
Position on landscape: Upper, concave side slopes of mountains
Distinctive present vegetation: Quaking aspen, mountain brome, slender wheatgrass

Interpretive Groups

Capability classification: Haunchee and Hardol soils—VIIIs, nonirrigated; Rock outcrop—VIIIIs
Range site: Haunchee soil—028BY032NV; Hardol soil—028BY042NV; Rock outcrop—none; Inclusion 1—028BY063NV; Inclusion 2—028BY070NV; Inclusion 3—028BY067NV

1174—Haunchee-Wardbay-Hardzem association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Haunchee very cobbly loam, 15 to 50 percent slopes—35 percent
- Wardbay very gravelly loam, 15 to 50 percent slopes—30 percent
- Hardzem channery loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Eganroc very gravelly loam, 30 to 75 percent slopes—5 percent
- Inclusion 2: Hardol very gravelly loam, 30 to 50 percent slopes—5 percent
- Inclusion 3: Rock outcrop—4 percent

- Inclusion 4: Pachic Cryoborolls gravelly silt loam, 30 to 50 percent slopes—1 percent

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Wardbay Soil

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Smooth side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 40 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; pebbles, 60 percent

Depth: 0 to 18 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 45 inches

Texture: Extremely cobbly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 45 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 40 to 60 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.5 inches

Water-supplying capacity: 10 to 15 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—3; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hardzem Soil

Classification: Typic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: Concave side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and shale

Slope range: 15 to 50 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 25 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 1 inch

Texture: Channery loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 21 inches

Texture: Extremely channery clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 52 inches

Texture: Fractured, weathered shale

Depth: 52 inches

Texture: Unweathered shale

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 12 to 18 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Side slopes of mountains; adjacent to areas of rock outcrop

Distinctive present vegetation: White fir, limber pine, bristlecone pine

Inclusion 2

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, needlegrass

Inclusion 3

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 4

Classification: Pachic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Upper, concave side slopes of mountains

Distinctive present vegetation: Erigonum, Letterman needlegrass

Interpretive Groups

Capability classification: Haunchee and Wardbay soils—VIIIs, Hardzem soil—VIIe, nonirrigated

Range site: Haunchee soil—028BY032NV; Wardbay soil—028BY070NV; Hardzem soil—028BY063NV; Inclusion 1—028BY049NV; Inclusion 2—28BY085NV; Inclusion 3—none; Inclusion 4—028BY051NV

1175—Haunchee-Hardol-Hardzem association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Haunchee very cobbly loam, 30 to 75 percent slopes—40 percent
- Hardol very gravelly silt loam, 15 to 50 percent slopes—25 percent
- Hardzem channery loam, 50 to 75 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Pachic Calcixerolls gravelly silt loam, 4 to 15 percent slopes—4 percent
- Inclusion 2: Wardbay very gravelly loam, 30 to 50 percent slopes—4 percent
- Inclusion 3: Rock outcrop—4 percent
- Inclusion 4: Hyzen extremely stony loam, 15 to 50 percent slopes—3 percent

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hardol Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Concave side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 8,500 to 10,500 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 20 inches

Average annual air temperature: About 40 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 20 percent; pebbles, 20 percent

Depth: 0 to 12 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 33 inches

Texture: Extremely gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 33 to 60 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches
Water-supplying capacity: 11 to 14 inches
Runoff: Rapid
Hydrologic group: B
Erosion factors (surface layer): K value—.28; T value—5;
 wind erodibility group—6
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Hardzem Soil

Classification: Typic Cryoboralfs, loamy-skeletal, mixed
Position on landscape: North-facing side slopes of
 mountains
Parent material: Residuum and colluvium derived from
 limestone and shale
Slope range: 50 to 75 percent
Elevation: 8,500 to 10,500 feet
Dominant present vegetation: White fir, limber pine,
 mountain big sagebrush, spike-fescue, bluebunch
 wheatgrass

Climatic Data

Average annual precipitation: About 25 inches
Average annual air temperature: About 41 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 1 inch
Texture: Channery loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 21 inches
Texture: Extremely channery clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 21 to 52 inches
Texture: Fractured, weathered shale

Depth: 52 inches
Texture: Unweathered shale

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60
 inches

Frequency of flooding: None
Permeability: Slow
Available water capacity: 1.5 to 2.5 inches
Water-supplying capacity: 12 to 18 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2;
 wind erodibility group—6
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Pachic Calcixerolls, fine-loamy, mixed, frigid
Position on landscape: Concave side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush,
 bluebunch wheatgrass, needlegrass

Inclusion 2

Classification: Pachic Calcixerolls, loamy-skeletal,
 carbonatic, frigid
Position on landscape: Side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush,
 bluebunch wheatgrass

Inclusion 3

Position on landscape: Crests and side slopes of
 mountains
Distinctive present vegetation: None

Inclusion 4

Classification: Lithic Haploxerolls, loamy-skeletal,
 carbonatic, frigid
Position on landscape: Lower side slopes of mountains
Distinctive present vegetation: Singleleaf pinyon, Utah
 juniper, mountain big sagebrush, bluebunch
 wheatgrass

Interpretive Groups

Capability classification: Haunchee and Hardol soils—
 VIIs, Hardzem soil—VIIe, nonirrigated
Range site: Haunchee soil—028BY032NV; Hardol soil—
 028BY042NV; Hardzem soil—028BY063NV; Inclusion
 1—028BY085NV; Inclusion 2—028BY070NV;
 Inclusion 3—none; Inclusion 4—028BY060NV

1176—Haunchee-Hardzem-Rock outcrop association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Haunchee very cobbly loam, 30 to 75 percent slopes—40 percent
- Hardzem channery loam, 30 to 75 percent slopes—30 percent
- Rock outcrop—15 percent

Contrasting inclusions:

- Inclusion 1: Hardol very gravelly silt loam, 30 to 75 percent slopes—5 percent
- Inclusion 2: Guiser extremely cobbly loam, 30 to 75 percent slopes—5 percent
- Inclusion 3: Wardbay very gravelly loam, 30 to 75 percent slopes—5 percent

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,500 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hardzem Soil

Classification: Typic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: Concave side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and shale

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,500 feet

Dominant present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 25 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 1 inch

Texture: Channery loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 21 inches

Texture: Extremely channery clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 52 inches

Texture: Fractured, weathered shale

Depth: 52 inches

Texture: Unweathered shale

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 12 to 18 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of mountains

Kind of rock: Limestone and dolomite

Contrasting Inclusions

Inclusion 1

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Mollic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: Upper side slopes of mountains

Distinctive present vegetation: White fir, quaking aspen, spike-fescue, mountain brome, slender wheatgrass

Inclusion 3

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Haunchee soil—VIIIs, Hardzem soil—VIIe, nonirrigated; Rock outcrop—VIIIIs

Range site: Haunchee soil—028BY032NV; Hardzem soil—028BY063NV; Rock outcrop—none; Inclusion 1—028BY042NV; Inclusion 2—028BY055NV; Inclusion 3—028BY070NV

1178—Haunchee-Hardol-Xine association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Haunchee very cobbly loam, 15 to 50 percent slopes—50 percent
- Hardol very gravelly silt loam, 30 to 50 percent slopes—20 percent
- Xine very gravelly loam, 15 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Hardzem channery loam, 30 to 50 percent slopes—5 percent
- Inclusion 2: Rock outcrop—5 percent
- Inclusion 3: Haunchee very gravelly loam, 8 to 30 percent slopes—5 percent

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 11 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Hardol Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Upper, concave side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 30 to 50 percent
Elevation: 8,500 to 10,000 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, needlegrass

Climatic Data

Average annual precipitation: About 20 inches
Average annual air temperature: About 40 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 20 percent; pebbles, 20 percent

Depth: 0 to 12 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 to 33 inches
Texture: Extremely gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 33 to 60 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 5.0 inches
Water-supplying capacity: 11 to 14 inches
Runoff: Rapid
Hydrologic group: B
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Xine Soil

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Lower, concave side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 30 percent
Elevation: 7,500 to 7,800 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 10 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 35 inches
Texture: Very cobbly loam
Structure: Massive
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 35 inches
Texture: Weathered limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 3.0 to 4.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: Upper, north-facing side slopes of mountains

Distinctive present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Haunchee, Hardol, and Xine soils—VIIIs, nonirrigated

Range site: Haunchee soil—028BY032NV; Hardol soil—028BY085NV; Xine soil—028BY088NV; Inclusion 1—028BY063NV; Inclusion 2—none; Inclusion 3—028BY043NV

1180—Eoj-Mclvey association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Eoj very stony loam, 15 to 30 percent slopes—40 percent

- Eoj very stony loam, 4 to 15 percent slopes—30 percent
- Mclvey gravelly loam, 8 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Hutchley very gravelly sandy loam, 15 to 50 percent slopes—4 percent
- Inclusion 2: Rock outcrop—4 percent
- Inclusion 3: Cavehill very gravelly silt loam, 8 to 30 percent slopes—4 percent
- Inclusion 4: Tusel cobbly loam, 15 to 50 percent slopes—3 percent

Characteristics of the Moderately Steep Eoj Soil

Classification: Typic Palexerolls, fine, montmorillonitic, frigid

Position on landscape: Side slopes of mountains

Parent material: Colluvium derived from quartzite, conglomerate, and limestone

Slope range: 15 to 30 percent

Elevation: 7,500 to 8,200 feet

Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 80 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 15 percent; pebbles, 30 percent

Depth: 0 to 8 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 60 inches

Texture: Cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 10.5 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1;
wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Less Sloping Eoj Soil

Classification: Typic Palexerolls, fine, montmorillonitic,
frigid

Position on landscape: Side slopes of mountains

Parent material: Colluvium derived from quartzite,
conglomerate, and limestone

Slope range: 4 to 15 percent

Elevation: 7,500 to 8,200 feet

Dominant present vegetation: Low sagebrush, bluebunch
wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 80 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles,
15 percent; pebbles, 30 percent

Depth: 0 to 8 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 60 inches

Texture: Cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 10.5 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1;
wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal,
montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from quartzite and
conglomerate

Slope range: 8 to 30 percent

Elevation: 7,500 to 8,200 feet

Dominant present vegetation: Mountain big sagebrush,
bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 5 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 5.0 to 7.5 inches

Water-supplying capacity: 10 to 18 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—5;
wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Position on landscape: Side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Argic Pachic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Eoj soils—VIIs, McIvey soil—VIe, nonirrigated

Range site: The moderately steep Eoj soil—028BY037NV; the less sloping Eoj soil—028BY037NV; McIvey soil—028BY030NV; Inclusion 1—028BY034NV; Inclusion 2—none; Inclusion 3—028BY062NV; Inclusion 4—025XY004NV

1190—Katelana-Boofuss association

Map Unit Setting

Position on landscape: Alluvial flats

Composition

Major components:

- Katelana silt loam, 0 to 2 percent slopes—65 percent

- Boofuss silty clay, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Typic Calciorthids gravelly sandy loam, 0 to 25 percent slopes—9 percent
- Inclusion 2: Boofuss silty clay, 0 to 2 percent slopes—2 percent
- Inclusion 3: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Sycomat sandy loam, 0 to 4 percent slopes—2 percent

Characteristics of the Katelana Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Alluvial flats

Parent material: Alluvium derived from limestone over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,200 feet

Dominant present vegetation: Shadscale, black greasewood, squirreltail

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 115 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Prismatic parting to platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 2 to 19 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 19 to 32 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 32 to 62 inches

Texture: Silty clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 62 to 75 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 13.0 to 16.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Characteristics of the Boofuss Soil

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic
Position on landscape: Alluvial flats
Parent material: Mixed alluvium and lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,800 to 6,200 feet
Dominant present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 5 inches
Texture: Silty clay
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Very strongly alkaline
Salinity: More than 16 mmhos per cm
Sodicity: SAR 50 to 80

Depth: 5 to 20 inches
Texture: Silty clay
Structure: Prismatic
Consistence: Hard, firm
Reaction: Very strongly alkaline
Salinity: More than 16 mmhos per cm
Sodicity: SAR 50 to 80

Depth: 20 to 60 inches
Texture: Fine sandy loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm
Sodicity: SAR 10 to 30

Soil and Water Features

Seasonal high water table: 0 to 30 inches above the surface
Frequency of flooding: Rare
Permeability: Slow
Available water capacity: 9.0 to 10.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.32; T value—5; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: High

Contrasting Inclusions

Inclusion 1

Classification: Typic Calciorthids, fine carbonatic, mesic
Position on landscape: Fan skirts adjacent to alluvial flats
Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic
Position on landscape: Alluvial flats
Distinctive present vegetation: Black greasewood, basin wildrye, inland saltgrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Fan skirts adjacent to alluvial flats
Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 4

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Fan skirts adjacent to alluvial flats
Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Interpretive Groups

Capability classification: Katelana soil—VIIs, Boofuss soil—VIIw, nonirrigated
Range site: Katelana soil—028BY074NV; Boofuss soil—028BY020NV; Inclusion 1—028BY028NV; Inclusion

2—028BY069NV; Inclusion 3—028BY028NV;
Inclusion 4—028BY074NV

1201—Biken-Orr association

Map Unit Setting

Position on landscape: Hills

Composition

Major components:

- Biken very gravelly fine sandy loam, 8 to 30 percent slopes—45 percent
- Orr gravelly sandy loam, 2 to 8 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 8 to 30 percent slopes—6 percent
- Inclusion 2: Tulse silt loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Pern silt loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Xerollic Haplargids very gravelly loam, 2 to 8 percent slopes—2 percent

Characteristics of the Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Summits and side slopes of hills

Parent material: Mixed alluvium over weathered tuff

Slope range: 8 to 30 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 5 inches

Texture: Very gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 18 inches

Texture: Very gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches

Texture: Partially decomposed, tuffaceous sandstone

Depth: 30 inches

Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the Orr Soil

Classification: Aridic Argixerolls, fine-loamy, mixed, mesic

Position on landscape: Slightly concave side slopes of hills

Parent material: Mixed alluvium and colluvium derived from tuff

Slope range: 2 to 8 percent

Elevation: 6,200 to 7,000 feet

Dominant present vegetation: Big sagebrush, basin wildrye, bluegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 100 days

Typical Profile

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 35 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 35 to 60 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 6.9 to 7.9 inches
Water-supplying capacity: 8.5 to 11.5 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic
Position on landscape: Concave, north-facing side slopes of hills
Distinctive present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Drainageways on hills
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic
Position on landscape: Narrow drainageways on hills
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 4

Classification: Xerollic Haplargids, fine-loamy, mixed, mesic
Position on landscape: Side slopes of hills
Distinctive present vegetation: Big sagebrush, needleandthread, Indian ricegrass

Interpretive Groups

Capability classification: Orr soil—IIIe, irrigated; Biken soil—VIIIs, Orr soil—VIc, nonirrigated

Range site: Biken soil—028BY060NV; Orr soil—028BY082NV; Inclusion 1—028BY058NV; Inclusion 2—028BY045NV; Inclusion 3—028BY003NV; Inclusion 4—028BY005NV

1202—Biken-Urmafot association

Map Unit Setting

Position on landscape: Hills and fan piedmonts

Composition

Major components:

- Biken very gravelly fine sandy loam, eroded, 8 to 30 percent slopes—40 percent
- Biken very gravelly fine sandy loam, 8 to 30 percent slopes—30 percent
- Urmafot very gravelly loam, 4 to 15 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Tulase silt loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Biken very gravelly fine sandy loam, 8 to 30 percent slopes—5 percent
- Inclusion 3: Palinor gravelly loam, 4 to 15 percent slopes—3 percent
- Inclusion 4: Aridic Haploxerolls gravelly loam, 2 to 8 percent slopes—2 percent

Characteristics of the Eroded Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Side slopes of hills
Parent material: Mixed alluvium over weathered tuff
Slope range: 8 to 30 percent
Elevation: 6,500 to 7,000 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent
Depth: 0 to 5 inches
Texture: Very gravelly fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 5 to 18 inches
Texture: Very gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches
Texture: Partially decomposed, tuffaceous sandstone

Depth: 30 inches
Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.5 inches
Water-supplying capacity: 6 to 9 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Characteristics of the Biken Soil

Classification: Xerollic Calciorthis, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Summits and side slopes of hills
Parent material: Mixed alluvium over weathered tuff
Slope range: 8 to 30 percent
Elevation: 6,500 to 7,000 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent
Depth: 0 to 9 inches
Texture: Very gravelly fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 9 to 18 inches
Texture: Very gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches
Texture: Partially decomposed, tuffaceous sandstone

Depth: 30 inches
Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.5 inches
Water-supplying capacity: 6 to 9 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants adjacent to hills
Parent material: Mixed alluvium
Slope range: 4 to 15 percent
Elevation: 6,500 to 7,000 feet
Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm
Depth: 8 to 14 inches
Texture: Gravelly loam

Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Drainageways and inset fans on hills
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Lower side slopes of hills
Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Inclusion 3

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Lower fan piedmont remnants
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 4

Classification: Aridic Haploxerolls, fine-loamy, mixed, mesic
Position on landscape: Inset fans and drainageways on hills on the upper part of the unit
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Interpretive Groups

Capability classification: Biken soils and the Urmafot soil—VIIs, nonirrigated
Range site: The eroded Biken soil—028BY060NV; Biken soil—028BY016NV; Urmafot—028BY006NV; Inclusion 1—028BY045NV; Inclusion 2—028BY083NV; Inclusion 3—028BY011NV; Inclusion 4—028BY007NV

1221—Cavehill-Grink-Onkeyo association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Cavehill cobbly loam, 15 to 50 percent slopes—40 percent
- Grink very stony loam, 30 to 75 percent slopes—30 percent
- Onkeyo very gravelly silt loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Hyzen extremely stony loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Rock outcrop—5 percent
- Inclusion 3: Hardol very gravelly silt loam, 15 to 50 percent slopes—3 percent
- Inclusion 4: Hardol very gravelly silt loam, 30 to 50 percent slopes—2 percent

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: Smooth, north-facing side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 7,200 to 8,100 feet
Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F
Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Grink Soil

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 7,200 to 8,100 feet

Dominant present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 2 percent; pebbles, 25 percent

Depth: 0 to 7 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 to 19 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 3.0 inches

Water-supplying capacity: 10 to 12.5 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—7

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Onkeyo Soil

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave, north-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,200 to 8,100 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 8 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 15 inches

Texture: Very cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 2.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Lower, south-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 3

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Upper, concave side slopes of mountains

Distinctive present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Upper, concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, needlegrass

Interpretive Groups

Capability classification: Cavehill, Grink, and Onkeyo soils—VIIIs, nonirrigated

Range site: Cavehill soil—028BY058NV; Grink soil—028BY032NV; Onkeyo soil—028BY079NV; Inclusion 1—028BY060NV; Inclusion 2—none; Inclusion 3—028BY042NV; Inclusion 4—028BY085NV

1222—Grink-Amelar-Xine association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Grink stony loam, 15 to 50 percent slopes—45 percent
- Amelar gravelly silt loam, 15 to 50 percent slopes—25 percent
- Xine very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Cavehill extremely stony loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Hyzen extremely stony loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Hardol very gravelly silt loam, 8 to 30 percent slopes—3 percent
- Inclusion 4: Pern silt loam, 2 to 4 percent slopes—2 percent

Characteristics of the Grink Soil

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from calcareous sandstone

Slope range: 15 to 50 percent

Elevation: 7,200 to 8,000 feet

Dominant present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 2 percent; pebbles, 25 percent

Depth: 0 to 7 inches
Texture: Stony loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 7 to 19 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 19 inches
Texture: Calcareous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 3.0 inches
Water-supplying capacity: 10 to 12.5 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Upper, north-facing side slopes of mountains
Parent material: Colluvium derived from limestone and sandstone
Slope range: 15 to 50 percent
Elevation: 7,200 to 8,000 feet

Dominant present vegetation: Utah serviceberry, antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 6 inches
Texture: Gravelly silt loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 6 to 15 inches
Texture: Very cobbly silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 5.0 to 8.0 inches
Water-supplying capacity: 12 to 14 inches
Runoff: Rapid
Hydrologic group: B
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Xine Soil

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Lower, north-facing side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,200 to 7,800 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 7 to 35 inches

Texture: Very cobbly loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 35 inches

Texture: Weathered limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 3.0 to 4.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Lower, north-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Inclusion 2

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Lower, south-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Grink and Xine soils—VIIIs, Amelar soil—VIIe, nonirrigated

Range site: Grink soil—028BY043NV; Amelar soil—028BY091NV; Xine soil—028BY088NV; Inclusion 1—028BY058NV; Inclusion 2—028BY060NV; Inclusion 3—028BY042NV; Inclusion 4—028BY003NV

1230—Garfan-Mclvey-Hutchley association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Garfan very gravelly loam, 15 to 50 percent slopes—50 percent
- Mclvey gravelly loam, 15 to 50 percent slopes—20 percent
- Hutchley very gravelly loam, 8 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Cassiro stony loam, 15 to 50 percent slopes—10 percent
- Inclusion 2: Chen very gravelly loam, 8 to 30 percent slopes—4 percent
- Inclusion 3: Cumulic Haplaquolls silt loam, 2 to 8 percent slopes—1 percent

Characteristics of the Garfan Soil

Classification: Xerollic Paleargids, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Convex side slopes of mountains
Parent material: Colluvium derived from quartzite
Slope range: 15 to 50 percent
Elevation: 7,000 to 8,000 feet
Dominant present vegetation: Antelope bitterbrush, low sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 10 percent; pebbles, 70 percent

Depth: 0 to 8 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 27 inches
Texture: Extremely cobbly clay
Structure: Angular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 27 to 60 inches
Texture: Extremely gravelly clay
Structure: Angular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Concave side slopes of mountains
Parent material: Colluvium derived from andesite and conglomerate
Slope range: 15 to 50 percent
Elevation: 7,000 to 8,000 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 5 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 5 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches
Texture: Very gravelly clay loam
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches
Texture: Extremely cobbly clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Medium
Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Hutchley Soil

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Crests of mountains

Parent material: Residuum derived from quartzite

Slope range: 8 to 30 percent

Elevation: 7,000 to 8,000 feet

Dominant present vegetation: Low sagebrush, black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 70 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 15 percent; pebbles, 45 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Very hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 1.3 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Crests of mountains

Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 3

Classification: Cumulic Haplaquolls, loamy-skeletal, mixed, frigid

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Nevada bluegrass, alpine timothy

Interpretive Groups

Capability classification: Garfan soil—VIIs, McIvey soil—VIIe, Hutchley soil—VIe, nonirrigated

Range site: Garfan soil—028BY035NV; McIvey soil—028BY030NV; Hutchley soil—028BY034NV; Inclusion 1—028BY046NV; Inclusion 2—028BY037NV; Inclusion 3—028BY095NV

1240—Biken association

Map Unit Setting

Position on landscape: Fan piedmont remnants

Composition

Major components:

- Biken very gravelly fine sandy loam, 4 to 15 percent slopes—35 percent
- Biken very gravelly fine sandy loam, dry, 15 to 30 percent slopes—30 percent
- Biken very gravelly fine sandy loam, 8 to 30 percent slopes, eroded—20 percent

Contrasting inclusions:

- Inclusion 1: Palior gravelly loam, 8 to 30 percent slopes—10 percent
- Inclusion 2: Xerollic Camborthids very gravelly loam, 0 to 4 percent slopes—3 percent

- Inclusion 3: Xeric Torriorthents gravelly sandy loam, 8 to 30 percent slopes—2 percent

Characteristics of the Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Summits of fan piedmont remnants that have a rock core

Parent material: Mixed alluvium over weathered tuff

Slope range: 4 to 15 percent

Elevation: 6,200 to 6,900 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 9 inches

Texture: Very gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 18 inches

Texture: Very gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches

Texture: Partially weathered, tuffaceous sandstone

Depth: 30 inches

Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the Dry Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants that have a rock core

Parent material: Mixed alluvium over weathered tuff

Slope range: 15 to 30 percent

Elevation: 6,200 to 6,900 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 9 inches

Texture: Very gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 18 inches

Texture: Very gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches

Texture: Partially weathered, tuffaceous sandstone

Depth: 30 inches

Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the Eroded Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants that have a rock core

Parent material: Mixed alluvium over weathered tuff

Slope range: 8 to 30 percent

Elevation: 6,200 to 6,900 feet

Dominant present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 3 inches

Texture: Very gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 18 inches

Texture: Very gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches

Texture: Partially weathered, tuffaceous sandstone

Depth: 30 inches

Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xerollic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Adjacent to inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants adjacent to inset fans

Distinctive present vegetation: Big sagebrush, needleandthread, Indian ricegrass

Interpretive Groups

Capability classification: Biken soils—VIIIs, nonirrigated

Range site: Biken soil—028BY011NV; the dry Biken soil—028BY016NV; the eroded Biken soil—028BY083NV; Inclusion 1—028BY011NV; Inclusion 2—028BY010NV; Inclusion 3—028BY005NV

1242—Biken-Palinor-Barfan association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Biken very gravelly fine sandy loam, 2 to 8 percent slopes—45 percent
- Palinor gravelly loam, 2 to 8 percent slopes—20 percent
- Barfan gravelly sandy loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Biken very gravelly fine sandy loam, 4 to 15 percent slopes—6 percent
- Inclusion 2: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Armespan very gravelly sandy loam, 2 to 4 percent slopes—4 percent

Characteristics of the Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants that have a rock core

Parent material: Mixed alluvium over weathered tuff

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 9 inches

Texture: Very gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 18 inches

Texture: Very gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches

Texture: Partially weathered, tuffaceous sandstone

Depth: 30 inches

Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the Palinoir Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Barfan Soil

Classification: Lithic Xeric Torriorthents, ashy, calcareous, mesic

Position on landscape: Convex summits of fan piedmont remnants that have a rock core

Parent material: Residuum derived from ash flow tuff and some calcareous loess

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Pigmy sagebrush, Indian ricegrass, needleandthread, galleta

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent

Depth: 0 to 2 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 11 inches

Texture: Sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 11 inches

Texture: Tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.5 inches

Water-supplying capacity: 4 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Convex side slopes of fan piedmont remnants that have a rock core

Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Inclusion 2

Classification: Xeric Torriorthents, fine-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Interpretive Groups

Capability classification: Biken, Palnor, and Barfan soils—VIIIs, nonirrigated

Range site: Biken soil—028BY011NV; Palnor soil—028BY011NV; Barfan soil—029XY092NV; Inclusion 1—028BY083NV; Inclusion 2—029XY006NV; Inclusion 3—029XY008NV

1243—Biken-Breko association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Biken very gravelly fine sandy loam, 2 to 8 percent slopes—45 percent
- Breko gravelly sandy loam, 2 to 8 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Lithic Xeric Torriorthents very gravelly loam, 4 to 15 percent slopes—6 percent
- Inclusion 2: Biken very gravelly fine sandy loam, 4 to 15 percent slopes—5 percent
- Inclusion 3: Armespan very gravelly sandy loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Durixerollic Calciorthids gravelly loam, 2 to 8 percent slopes—2 percent

Characteristics of the Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants that have a rock core

Parent material: Mixed alluvium over weathered tuff

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 9 inches

Texture: Very gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 18 inches

Texture: Very gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches

Texture: Partially weathered, tuffaceous sandstone

Depth: 30 inches

Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the Breko Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 9 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 26 inches

Texture: Extremely gravelly sandy clay loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 4.5 inches

Water-supplying capacity: 5 to 6 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.24; T value—5;
wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xeric Torriorthents, ashy, calcareous, mesic

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Utah juniper, pigmy sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Convex side slopes of fan piedmont remnants that have a rock core

Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Inclusion 4

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, spiny hopsage, Indian ricegrass

Interpretive Groups

Capability classification: Biken and Breko soils—VIIs, nonirrigated

Range site: Biken soil—028BY011NV; Breko soil—029XY006NV; Inclusion 1—028AY021NV; Inclusion 2—028BY083NV; Inclusion 3—029XY008NV; Inclusion 4—028BY052NV

1245—Biken-Tulase association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Biken very gravelly fine sandy loam, 2 to 8 percent slopes—40 percent

- Biken very gravelly fine sandy loam, 8 to 30 percent slopes, eroded—30 percent

- Tulase silt loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Durorthidic Xeric Torriorthents silt loam, 2 to 4 percent slopes—10 percent

- Inclusion 2: Broland very gravelly loam, 4 to 15 percent slopes—2 percent

- Inclusion 3: Heist silt loam, 2 to 4 percent slopes—2 percent

- Inclusion 4: Yody gravelly sandy loam, 2 to 8 percent slopes—1 percent

Characteristics of the Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Summits of fan piedmont remnants that have a rock core

Parent material: Mixed alluvium over weathered tuff

Slope range: 2 to 8 percent

Elevation: 6,000 to 7,000 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 9 inches

Texture: Very gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 18 inches

Texture: Very gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches

Texture: Partially weathered, tuffaceous sandstone

Depth: 30 inches

Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.5 inches
Water-supplying capacity: 6 to 9 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1;
 wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Characteristics of the Eroded Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed,
 mesic, shallow
Position on landscape: Side slopes of fan piedmont
 remnants that have a rock core
Parent material: Mixed alluvium over weathered tuff
Slope range: 8 to 30 percent
Elevation: 6,000 to 7,000 feet
Dominant present vegetation: Utah juniper, black
 sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 3 inches
Texture: Very gravelly fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 18 inches
Texture: Very gravelly fine sandy loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches
Texture: Partially weathered, tuffaceous sandstone

Depth: 30 inches
Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60
 inches

Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.5 inches
Water-supplying capacity: 6 to 9 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1;
 wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty,
 mixed (calcareous), mesic
Position on landscape: Inset fans
Parent material: Silty alluvium derived from mixed rocks
 and some volcanic ash
Slope range: 2 to 4 percent
Elevation: 6,000 to 7,000 feet
Dominant present vegetation: Wyoming big sagebrush,
 winterfat, basin wildrye, Indian ricegrass, thickspike
 wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60
 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5;
wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass

Interpretive Groups

Capability classification: Tulasé soil—Ile, irrigated; Biken soils—VIIIs, Tulasé soil—VIc, nonirrigated

Range site: Biken soil—028BY011NV; the eroded Biken soil—028BY083NV; Tulasé soil—028BY045NV;
Inclusion 1—028BY010NV; Inclusion 2—28BY089NV;
Inclusion 3—028BY084NV; Inclusion 4—28BY086NV

1251—Alley-Yody-Cowgil association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Alley gravelly sandy loam, 2 to 8 percent slopes—40 percent
- Yody gravelly sandy loam, 2 to 8 percent slopes—25 percent

- Cowgil very gravelly sandy loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Shabliss gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Tulasé silt loam, 0 to 4 percent slopes—4 percent
- Inclusion 3: Aridic Durixerolls gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Yody gravelly sandy loam, 2 to 8 percent slopes—3 percent

Characteristics of the Alley Soil

Classification: Durixerollic Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Loess over alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 16 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 50 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 8 mmhos per cm

Depth: 50 to 60 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline
Salinity: 2 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Hazard of flooding: None
Permeability: Moderately slow
Available water capacity: 5.0 to 7.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Alluvium derived from andesite
Slope range: 2 to 8 percent
Elevation: 6,000 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches
Texture: Gravelly sandy loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches
Texture: Gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches
Texture: Gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches
Texture: Strongly cemented duripan
Structure: Massive
Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 5.0 to 6.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Cowgil Soil

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Alluvium derived from andesite
Slope range: 2 to 8 percent
Elevation: 6,000 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 4 inches
Texture: Very gravelly sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 21 inches
Texture: Very gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 21 to 61 inches
Texture: Very gravelly loamy sand

Structure: Single grained
Consistence: Loose
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 2.5 to 3.5 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Aridic Durixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Yody soil—IIIe, irrigated; Alley soil—VIIc, Yody soil—VIs, Cowgil soil—VIIs, nonirrigated
Range site: Alley soil—028BY010NV; Yody soil—028BY086NV; Cowgil soil—028BY010NV; Inclusion

1—028BY080NV; Inclusion 2—028BY045NV; Inclusion 3—028BY010NV; Inclusion 4—028BY010NV

1260—Urmafot association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Urmafot very gravelly loam, 4 to 15 percent slopes—70 percent
- Urmafot gravelly loam, 4 to 15 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Aridic Haploxerolls gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Bobs very gravelly loam, 4 to 15 percent slopes—4 percent
- Inclusion 3: Amelar gravelly silt loam, 4 to 15 percent slopes—4 percent
- Inclusion 4: Urmafot very gravelly loam, 8 to 30 percent slopes—2 percent

Characteristics of the Very Gravelly Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Lower fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,500 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Depth: 14 to 32 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Gravelly Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Upper fan piedmont remnants adjacent to mountains
Parent material: Mixed alluvium
Slope range: 4 to 15 percent
Elevation: 6,500 to 7,500 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 9 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline

Depth: 9 to 32 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Moderately alkaline

Soil and Water Features

Depth to a hardpan: 9 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Haploxerolls, fine-loamy, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Inclusion 2

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 3

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Upper side slopes of fan piedmont remnants
Distinctive present vegetation: Utah serviceberry, antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Inclusion 4

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper side slopes of fan piedmont remnants

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Urmafot soils—VIIs, nonirrigated

Range site: The very gravelly Urmafot soil—28BY006NV; the gravelly Urmafot soil—028BY060NV; Inclusion 1—28BY007NV; Inclusion 2—028BY094NV; Inclusion 3—028BY091NV; Inclusion 4—028BY008NV

1270—Boofuss-Equis association

Map Unit Setting

Position on landscape: Alluvial flats

Composition

Major components:

- Boofuss silty clay, 0 to 2 percent slopes—35 percent
- Boofuss silty clay, dry, 0 to 2 percent slopes—30 percent

- Equis silty clay, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Equis silty clay, 0 to 2 percent slopes—5 percent
- Inclusion 2: Typic Torriorthents sandy loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Katelana silt loam, 2 to 4 percent slopes—5 percent

Characteristics of the Boofuss Soil

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic

Position on landscape: Alluvial flats

Parent material: Mixed alluvium and lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,100 feet

Dominant present vegetation: Black greasewood, basin wildrye, inland saltgrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 5 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Very strongly alkaline

Salinity: More than 16 mmhos per cm

Sodicity: SAR 50 to 80

Depth: 5 to 20 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Hard, firm

Reaction: Very strongly alkaline

Salinity: More than 16 mmhos per cm

Sodicity: SAR 50 to 80

Depth: 20 to 60 inches

Texture: Fine sandy loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Sodicity: SAR 10 to 30

Soil and Water Features

Seasonal high water table: 0 to 30 inches above the surface

Frequency of flooding: Rare

Permeability: Slow

Available water capacity: 9.0 to 10.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.32; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Characteristics of the Dry Boofuss Soil

Classification: Typic Halaquepts, clayey over loamy, montmorillonitic (calcareous), mesic

Position on landscape: Alluvial flats adjacent to areas of springs and seeps

Parent material: Lacustrine sediments and mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,100 feet

Dominant present vegetation: Alkali sacaton, alkali cordgrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 5 inches

Texture: Silty clay

Structure: Prismatic

Consistence: Very hard, very firm

Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm
Sodicity: SAR 40 to 70

Depth: 5 to 20 inches
Texture: Silty clay
Structure: Prismatic
Consistence: Hard, firm
Reaction: Very strongly alkaline
Salinity: More than 16 mmhos per cm
Sodicity: SAR 50 to 80

Depth: 20 to 60 inches
Texture: Fine sandy loam
Structure: Prismatic
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm
Sodicity: SAR 10 to 30

Soil and Water Features

Seasonal high water table: 0 to 30 inches above the surface
Frequency of flooding: Rare
Permeability: Slow
Available water capacity: 9.0 to 10.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Very slow
Hydrologic group: D
Erosion factors (surface layer): K value—.32; T value—5; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: High

Characteristics of the Equis Soil

Classification: Typic Halaquepts, fine, carbonatic, mesic
Position on landscape: Alluvial flats
Parent material: Mixed alluvium and lacustrine sediments
Slope range: 0 to 2 percent
Elevation: 5,900 to 6,100 feet
Dominant present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Climatic Data

Average annual precipitation: About 9 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches
Texture: Silty clay
Structure: Subangular blocky

Consistence: Slightly hard, friable
Reaction: Very strongly alkaline
Salinity: More than 16 mmhos per cm
Sodicity: SAR 50 to 80

Depth: 6 to 30 inches
Texture: Silty clay
Structure: Prismatic
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: 8 to 16 mmhos per cm
Sodicity: SAR 40 to 70

Depth: 30 to 50 inches
Texture: Silty clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm
Sodicity: SAR less than 5

Depth: 50 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm
Sodicity: SAR less than 5

Soil and Water Features

Depth to a seasonal high water table: 12 to 36 inches
Frequency of flooding: Rare
Permeability: Very slow
Available water capacity: 8.5 to 12.5 inches
Water-supplying capacity: 9 to 12 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—high; concrete—high
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Halaquepts, fine, carbonatic, mesic
Position on landscape: Alluvial flats adjacent to areas of springs and seeps
Distinctive present vegetation: Black greasewood, basin wildrye, alkali sacaton

Inclusion 2

Classification: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Sand sheets on alluvial flats

Distinctive present vegetation: Black greasewood, shadscale, bottlebrush squirreltail

Inclusion 3

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Alluvial flats

Distinctive present vegetation: Black greasewood, shadscale, bottlebrush squirreltail

Interpretive Groups

Capability classification: Boofuss soils—VIIw, Equis soil—VIw, nonirrigated

Range site: Boofuss soil—028BY069NV; the dry Boofuss soil—028BY020NV; Equis soil—028BY002NV;

Inclusion 1—028BY004NV; Inclusion 2—028BY074NV; Inclusion 3—028BY074NV

1280—Palinor-Molion-Broland association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinor gravelly loam, 2 to 8 percent slopes—45 percent
- Molion very gravelly sandy loam, 2 to 8 percent slopes—25 percent
- Broland very gravelly loam, 2 to 8 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Palinor gravelly loam, 8 to 30 percent slopes—4 percent
- Inclusion 2: Tulase silt loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Heist silt loam, 2 to 4 percent slopes—4 percent
- Inclusion 4: Wintermute gravelly silt loam, 2 to 4 percent slopes—3 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Molion Soil

Classification: Haploxerollic Durorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium and some loess

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 52 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 2 inches

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 14 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 25 inches

Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.7 to 1.0 inch

Water-supplying capacity: 5 to 7 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.05; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Broland Soil

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium derived from volcanic rock

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 to 40 inches

Texture: Strongly cemented duripan

Consistence: Extremely hard, extremely firm

Depth: 40 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 4

Classification: Duric Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Shadscale, winterfat, Indian ricegrass, galleta

Interpretive Groups

Capability classification: Molion—IVE, irrigated; Palino, Molion, and Broland—VII, nonirrigated

Range site: Palino—028BY011NV; Molion—028BY011NV; Broland—028BY089NV; Inclusion 1—028BY016NV; Inclusion 2—028BY045NV; Inclusion 3—028BY084NV; Inclusion 4—029XY090NV

1282—Urmafot-Palino association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Urmafot very gravelly loam, 2 to 8 percent slopes—35 percent
- Urmafot gravelly loam, 8 to 30 percent slopes—30 percent
- Palino gravelly loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Urmafot gravelly loam, 8 to 30 percent slopes—5 percent
- Inclusion 2: Bobs very gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 3: Pern silt loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Aridic Durixerolls gravelly loam, 15 to 30 percent slopes—2 percent

Characteristics of the Very Gravelly Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,500 to 7,200 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1;
 wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Gravelly Urmafot Soil

Classification: Orthodic Durixerolls, loamy, mixed, mesic,
 shallow
Position on landscape: Upper side slopes of fan piedmont
 remnants
Parent material: Mixed alluvium
Slope range: 8 to 30 percent
Elevation: 6,500 to 7,200 feet
Dominant present vegetation: Black sagebrush, bluebunch
 wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches
Texture: Stratified, extremely gravelly coarse sandy loam
 to extremely gravelly sandy loam
Structure: Massive

Consistence: Very hard, very firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches
Depth to a seasonal high water table: More than 60
 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.20; T value—1;
 wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal,
 carbonatic, mesic, shallow
Position on landscape: Lower fan piedmont remnants
Parent material: Alluvium derived from limestone and
 dolomite
Slope range: 2 to 8 percent
Elevation: 6,200 to 7,000 feet
Dominant present vegetation: Black sagebrush, Indian
 ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches
Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Upper side slopes of fan piedmont remnants
Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Big sagebrush, Indian ricegrass

Inclusion 3

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 4

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic, shallow
Position on landscape: North-facing side slopes of fan piedmont remnants

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: The very gravelly Urmafot soil and the Palinoir soil—VIIIs, the gravelly Urmafot soil—VIIe, nonirrigated

Range site: The very gravelly Urmafot soil—028BY006NV; the gravelly Urmafot soil—028BY006NV; Palinoir soil—028BY011NV; Inclusion 1—028BY060NV; Inclusion 2—028BY094NV; Inclusion 3—028BY003NV; Inclusion 4—028BY062NV

1283—Urmafot-Fax association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Urmafot gravelly loam, 4 to 15 percent slopes—45 percent
- Fax very cobbly coarse sandy loam, 4 to 15 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Urmafot gravelly loam, 15 to 30 percent slopes—10 percent
- Inclusion 2: Aridic Haploxerolls gravelly loam, 2 to 8 percent slopes—5 percent

Characteristics of the Urmafot Soil

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,500 to 7,500 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 8 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 14 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 to 32 inches
Texture: Indurated duripan
Structure: Massive
Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches
Texture: Extremely gravelly coarse sandy loam
Structure: Massive
Consistence: Very hard, very firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 15 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Fax Soil

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Alluvium derived from andesite
Slope range: 4 to 15 percent
Elevation: 6,500 to 7,500 feet
Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 15 percent

Depth: 0 to 3 inches
Texture: Very cobbly coarse sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches
Texture: Very gravelly sandy clay loam
Structure: Subangular blocky
Consistence: Hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 to 22 inches
Texture: Very gravelly sandy clay loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 22 to 48 inches
Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 20 to 36 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 11 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Side slopes of fan piedmont remnants
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Aridic Haploxerolls, loamy-skeletal, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Interpretive Groups

Capability classification: Urmafot and Fax soils—VIIIs, nonirrigated

Range site: Urmafot soil—028BY006NV; Fax soil—028BY007NV; Inclusion 1—028BY008NV; Inclusion 2—028BY007NV

1287—Palinor-Izar-Biken association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Palinor gravelly loam, 4 to 15 percent slopes—45 percent
 - Izar very gravelly loam, 8 to 30 percent slopes—25 percent
 - Biken very gravelly fine sandy loam, 8 to 30 percent slopes—15 percent
- Contrasting inclusions:*
- Inclusion 1: Tulase silt loam, 0 to 4 percent slopes—5 percent
 - Inclusion 2: Raph loam, 2 to 8 percent slopes—5 percent
 - Inclusion 3: Linoyer very fine sandy loam, 0 to 4 percent slopes—5 percent

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 4 to 15 percent

Elevation: 6,000 to 7,200 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches

Texture: Indurated duripan

Depth: 30 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Izar Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Convex side slopes of fan piedmont remnants that have a rock core

Parent material: Residuum and colluvium derived from tuffaceous sandstone

Slope range: 8 to 30 percent

Elevation: 6,000 to 7,200 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Fractured sandstone

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: None to 2.0 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Biken Soil

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants that have a rock core

Parent material: Mixed alluvium over weathered tuff

Slope range: 8 to 30 percent

Elevation: 6,000 to 7,200 feet

Dominant present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 3 inches

Texture: Very gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 18 inches

Texture: Very gravelly fine sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 30 inches

Texture: Partially weathered, tuffaceous sandstone

Depth: 30 inches

Texture: Compact, tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions**Inclusion 1**

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Typic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Palinoz, Izar, and Biken soils—Vlls, nonirrigated

Range site: Palinoz soil—028BY011NV; Izar soil—028BY016NV; Biken soil—028BY083NV; Inclusion 1—028BY045NV; Inclusion 2—028BY017NV; Inclusion 3—028BY013NV

1288—Urmafot-Cavehill-Pookaloo association**Map Unit Setting**

Position on landscape: Fan piedmonts and hills

Composition

Major components:

- Urmafot gravelly loam, 4 to 15 percent slopes—40 percent
- Cavehill very gravelly silt loam, 15 to 50 percent slopes—25 percent
- Pookaloo very gravelly loam, 15 to 50 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Urmafot very gravelly loam, 4 to 15 percent slopes—10 percent
- Inclusion 2: Xerollic Camborthids very gravelly loam, 2 to 8 percent slopes—5 percent

Characteristics of the Urmafot Soil

Classification: Orthodic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,500 to 7,500 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 9 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 32 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Depth: 32 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Very hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 9 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 15 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North-facing side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,900 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of hills

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 6,500 to 7,900 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 4 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches

Texture: Very gravelly silt loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 2.5 inches

Water-supplying capacity: 10 to 13 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Orthodic Durixerolls, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Xerollic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Urmafot, Cavehill, and Pookaloo soils—VIIIs, nonirrigated

Range site: Urmafot soil—028BY060NV; Cavehill soil—

028BY062NV; Pookaloo soil—028BY060NV; Inclusion 1—028BY006NV; Inclusion 2—028BY010NV

1291—Maderbak-Mclvey association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Maderbak very gravelly clay loam, 8 to 30 percent slopes—50 percent
- Mclvey very cobbly loam, 30 to 50 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Atlow very gravelly loam, 8 to 30 percent slopes—6 percent
- Inclusion 2: Mclvey gravelly loam, 15 to 50 percent slopes—6 percent
- Inclusion 3: Stewval very gravelly fine sandy loam, 8 to 30 percent slopes—3 percent

Characteristics of the Maderbak Soil

Classification: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum and colluvium derived from andesite

Slope range: 8 to 30 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 15 percent; pebbles, 25 percent

Depth: 0 to 3 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 17 inches

Texture: Very gravelly clay

Structure: Angular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 17 to 29 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Slightly hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 29 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.0 to 3.0 inches

Water-supplying capacity: 6 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Characteristics of the Mclvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from andesite

Slope range: 30 to 50 percent

Elevation: 6,800 to 7,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches
Texture: Extremely cobbly clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic
Position on landscape: Convex side slopes of mountains
Distinctive present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Inclusion 2

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Concave side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic
Position on landscape: Convex side slopes of mountains
Distinctive present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Interpretive Groups

Capability classification: Maderbak and McIvey soils—Vlls, nonirrigated
Range site: Maderbak soil—028AY022NV; McIvey soil—028BY087NV; Inclusion 1—028BY089NV; Inclusion 2—028BY030NV; Inclusion 3—029XY014NV

1300—Barfan-Tulase association

Map Unit Setting

Position on landscape: Low hills

Composition

Major components:

- Barfan gravelly sandy loam, 2 to 8 percent slopes—45 percent
 - Tulase silt loam, 2 to 8 percent slopes—40 percent
- Contrasting inclusions:*
- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 2 to 4 percent slopes—9 percent
 - Inclusion 2: Breko gravelly sandy loam, 2 to 8 percent slopes—3 percent
 - Inclusion 3: Biken very gravelly fine sandy loam, 4 to 15 percent slopes—3 percent

Characteristics of the Barfan Soil

Classification: Lithic Xeric Torriorthents, ashy, calcareous, mesic
Position on landscape: Low hills
Parent material: Residuum derived from ash flow tuff and some calcareous loess
Slope range: 2 to 8 percent
Elevation: 6,000 to 6,800 feet
Dominant present vegetation: Pigmy sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 8 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 40 percent
Depth: 0 to 2 inches
Texture: Gravelly sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm
Depth: 2 to 11 inches
Texture: Sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm
Depth: 11 inches
Texture: Tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 7 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 5.5 inches
Water-supplying capacity: 4 to 7 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Drainageways on hills
Parent material: Silty alluvium derived from mixed rocks and some volcanic ash
Slope range: 2 to 8 percent
Elevation: 6,000 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic, shallow
Position on landscape: Low hills
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xerollic Haplargids, loamy-skeletal, mixed, mesic
Position on landscape: Fan piedmonts adjacent to low hills
Distinctive present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Inclusion 3

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Low hills
Distinctive present vegetation: Utah juniper, black sagebrush

Interpretive Groups

Capability classification: Tulase soil—IIIe, irrigated; Barfan soil—VIIIs, Tulase soil—VIc, nonirrigated
Range site: Barfan soil—028BY040NV; Tulase soil—028BY045NV; Inclusion 1—028BY080NV; Inclusion 2—029XY006NV; Inclusion 3—028BY083NV

1310—Kunzler-Duffer association**Map Unit Setting**

Position on landscape: Fan piedmonts, alluvial flats, and fan skirts

Composition

Major components:

- Kunzler loam, warm, 2 to 4 percent slopes—40 percent
 - Duffer silt loam, 0 to 2 percent slopes—30 percent
 - Kunzler loam, 2 to 4 percent slopes—15 percent
- Contrasting inclusions:*
- Inclusion 1: Sycomat sandy loam, 2 to 4 percent slopes—6 percent

- Inclusion 2: Pern silt loam, 0 to 2 percent slopes—4 percent
- Inclusion 3: Aquic Calciorthids silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 4: Aquic Calciorthids silt loam, 0 to 2 percent slopes—2 percent

Characteristics of the Warm Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan piedmonts

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 5,500 to 5,800 feet

Dominant present vegetation: Torrey quailbush, big sagebrush, black greasewood, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches

Texture: Loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, brittle

Reaction: Very strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.5 to 9.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Duffer Soil

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Alluvial flats

Parent material: Mixed alluvium and lake sediments

Slope range: 0 to 2 percent

Elevation: 5,500 to 5,800 feet

Dominant present vegetation: Alkali sacaton, inland saltgrass, iodinebush

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 6 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Depth: 6 to 60 inches

Texture: Silty clay loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 36 to 60 inches

Frequency of flooding: Rare

Permeability: Moderately slow

Available water capacity: 11.5 to 12.5 inches

Water-supplying capacity: 11 to 13 inches

Runoff: Very slow

Hydrologic group: C

Erosion factors (surface layer): K value—.49; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: High

Characteristics of the Kunzler Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 5,500 to 5,800 feet

Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 10 inches

Texture: Loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 10 to 26 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, brittle

Reaction: Very strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 6.5 to 9.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.37; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan piedmonts

Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Inclusion 2

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Inset fans adjacent to stream channels

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 3

Classification: Aquic Calciorthids, fine-silty, carbonatic, mesic

Position on landscape: Alluvial flats

Distinctive present vegetation: Torrey quailbush, black greasewood, basin big sagebrush, basin wildrye

Inclusion 4

Classification: Aquic Calciorthids, fine-silty, mixed, mesic

Position on landscape: Alluvial flats adjacent to springs and seeps

Distinctive present vegetation: Fourwing saltbush, western wheatgrass

Interpretive Groups

Capability classification: Duffer soil—IVw, irrigated;

Kunzler soils—VIIc, Duffer soil—VIw, nonirrigated

Range site: The warm Kunzler soil—029XY091NV; Duffer soil—029XY094NV; Kunzler soil—028BY028NV;

Inclusion 1—028BY074NV; Inclusion 2—

028BY041NV; Inclusion 3—029XY093NV; Inclusion

4—028BY023NV

1321—Sycomat sandy loam, 0 to 4 percent slopes

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major component:

- Sycomat sandy loam, 0 to 4 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Typic Calciorthids gravelly sandy loam, 2 to 4 percent slopes—5 percent
- Inclusion 2: Aquic Calciorthids silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Hessing silt loam, 2 to 4 percent slopes—5 percent

Characteristics of the Sycomat Soil

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,800 to 6,500 feet

Dominant present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 100 days

Typical Profile

Depth: 0 to 4 inches

Texture: Sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 15 inches

Texture: Sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 15 to 44 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, brittle

Reaction: Very strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 44 to 60 inches

Texture: Stratified sandy loam to sand

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 3.5 to 4.5 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.24; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Typic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan skirts adjacent to fan piedmont remnants

Distinctive present vegetation: Shadsale, black greasewood, bottlebrush squirreltail

Inclusion 2

Classification: Aquic Calciorthids, fine-silty, mixed, mesic

Position on landscape: Lower fan skirts

Distinctive present vegetation: Black greasewood, basin wildrye, alkali sacaton

Inclusion 3

Classification: Typic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Sycomat soil—VIIc, nonirrigated

Range site: Sycomat soil—028BY074NV; Inclusion 1—028BY074NV; Inclusion 2—028BY004NV; Inclusion 3—028BY017NV

1330—Yody-Dewar association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Yody gravelly sandy loam, 2 to 8 percent slopes—55 percent
- Dewar gravelly silt loam, 4 to 8 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Broland very gravelly loam, 4 to 8 percent slopes—5 percent
- Inclusion 2: Durixerollic Calciorthids gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Kunzler loam, 2 to 4 percent slopes—3 percent
- Inclusion 4: Pyrat gravelly sandy loam, 2 to 4 percent slopes—3 percent

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Dewar Soil

Classification: Xerollic Durargids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Loess, mixed silty alluvium, and some volcanic ash

Slope range: 4 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 3 inches

Texture: Gravelly silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 12 to 18 inches

Texture: Gravelly silt loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 8 mmhos per cm

Depth: 18 to 60 inches

Texture: Indurated duripan

Structure: Massive

Consistence: Extremely hard, extremely firm

Soil and Water Features

Depth to a hardpan: 13 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 3.0 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—1;
wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Haploxerollic Durargids, loamy-skeletal,
mixed, mesic, shallow

Position on landscape: Upper fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian
ricegrass, Thurber needlegrass

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal,
mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush,
spiny hopsage, Indian ricegrass

Inclusion 3

Classification: Durixerollic Calciorthids, coarse-loamy,
mixed, mesic

Position on landscape: Lower fan piedmont remnants

Distinctive present vegetation: Black greasewood, big
sagebrush, basin wildrye

Inclusion 4

Classification: Durixerollic Calciorthids, loamy-skeletal,
mixed, mesic

Position on landscape: Lower fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush,
needleandthread

Interpretive Groups

Capability classification: Yody soil—IIIe, irrigated; Yody
soil—VIIs, Dewar soil—VIIIs, nonirrigated

Range site: Yody soil—028BY010NV; Dewar soil—
028BY080NV; Inclusion 1—028BY089NV; Inclusion
2—028BY052NV; Inclusion 3—028BY028NV;
Inclusion 4—028BY010NV

1340—Pyrat-Tulase association

Map Unit Setting

Position on landscape: Fan piedmonts and fan skirts

Composition

Major components:

- Pyrat gravelly sandy loam, 2 to 4 percent slopes—50 percent

- Tulase silt loam, 0 to 4 percent slopes—35 percent

Contrasting inclusions:

- Inclusion 1: Shabliss gravelly loam, 0 to 2 percent slopes—9 percent
- Inclusion 2: Automal gravelly silt loam, 2 to 4 percent slopes—3 percent
- Inclusion 3: Durorthidic Xeric Torriorthents silt loam, 2 to 4 percent slopes—2 percent
- Inclusion 4: Broyles silt loam, 0 to 2 percent slopes—1 percent

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal,
mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 5,900 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush,
needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches
Texture: Extremely gravelly loamy sand
Structure: Massive
Consistence: Hard, very friable
Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 5.0 inches
Water-supplying capacity: 7 to 12 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Fan skirts and inset fans
Parent material: Silty alluvium derived from mixed rocks and some volcanic ash
Slope range: 0 to 4 percent
Elevation: 5,900 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, friable

Reaction: Strongly alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Side slopes of fan piedmont remnants
Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, spiny hopsage, Indian ricegrass

Inclusion 4

Classification: Duric Camborthids, coarse-loamy, mixed, mesic
Position on landscape: Lower areas of fan skirts
Distinctive present vegetation: Shadscale, Indian ricegrass

Interpretive Groups

Capability classification: Tulase soil—Ile, irrigated; Pyrat soil—VIIIs, Tulase soil—VIc, nonirrigated
Range site: Pyrat soil—028BY010NV; Tulase soil—028BY045NV; Inclusion 1—028BY080NV; Inclusion 2—028BY011NV; Inclusion 3—028BY052NV; Inclusion 4—028BY075NV

1351—Hyzen-Kyler-Rock outcrop association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Hyzen extremely stony loam, 30 to 75 percent slopes—35 percent
- Kyler very gravelly very fine sandy loam, 30 to 75 percent slopes—30 percent
- Rock outcrop—20 percent

Contrasting inclusions:

- Inclusion 1: Haunchee very gravelly loam, 15 to 50 percent slopes—9 percent
- Inclusion 2: Eaglepass extremely stony loam, 30 to 75 percent slopes—5 percent
- Inclusion 3: Xeric Torriorthents gravelly sandy loam, 4 to 15 percent slopes—1 percent

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 45 percent

Depth: 0 to 2 inches

Texture: Extremely stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 12 inches

Texture: Extremely stony loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 6 to 9 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Kyler Soil

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Black sagebrush, galleta, Nevada ephedra, Indian ricegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 30 percent; pebbles, 40 percent

Depth: 0 to 3 inches

Texture: Very gravelly very fine sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 to 1.0 inch

Water-supplying capacity: 4 to 7 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of mountains

Kind of rock: Limestone and dolomite

Contrasting Inclusions

Inclusion 1

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Upper, north-facing side slopes of mountains

Distinctive present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Xeric Torriorthents, loamy-skeletal, carbonatic, mesic

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Littleleaf mountainmahogany, Indian ricegrass

Inclusion 3

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Drainageways on mountains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Hyzen and Kyler soils—VIIIs, nonirrigated; Rock outcrop—VIIIs

Range site: Hyzen soil—028BY060NV; Kyler soil—029XY014NV; Rock outcrop—none; Inclusion 1—

028BY043NV; Inclusion 2—029XY040NV; Inclusion 3—028BY045NV

1360—Eganroc-Hyzen-Hardzem association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Eganroc very stony loam, 30 to 75 percent slopes—50 percent
- Hyzen extremely stony loam, 30 to 75 percent slopes—20 percent
- Hardzem channery loam, 30 to 75 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—10 percent
- Inclusion 2: Haunchee very cobbly loam, 30 to 75 percent slopes—3 percent
- Inclusion 3: Rubble land, 30 to 75 percent slopes—2 percent

Characteristics of the Eganroc Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Convex side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 9,500 feet

Dominant present vegetation: White fir, limber pine, bristlecone pine

Climatic Data

Average annual precipitation: About 25 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 30 percent; pebbles, 30 percent

Depth: 0 to 9 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 34 inches

Texture: Extremely gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 34 inches
Texture: Dolomite

Soil and Water Features

Depth to bedrock: 30 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 3.5 inches
Water-supplying capacity: 10 to 13.5 inches
Runoff: Very rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: Side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 30 to 75 percent
Elevation: 8,500 to 9,500 feet
Dominant present vegetation: Littleleaf mountainmahogany, black sagebrush, Scribner needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 45 percent

Depth: 0 to 1 inch
Texture: Extremely stony loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 6 inches
Texture: Extremely stony loam
Structure: Subangular blocky

Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 6 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 6 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Hardzem Soil

Classification: Typic Cryoboralfs, loamy-skeletal, mixed
Position on landscape: North-facing side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and shale
Slope range: 30 to 75 percent
Elevation: 8,500 to 9,500 feet
Dominant present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 25 inches
Average annual air temperature: About 41 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 5 percent
Depth: 0 to 1 inch
Texture: Channery loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 21 inches
Texture: Extremely channery clay loam
Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 52 inches

Texture: Fractured, weathered shale

Depth: 52 inches

Texture: Unweathered shale

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 12 to 18 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Position on landscape: Side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Eganroc and Hyzen soils—VIIs, Hardzem soil—VIIe, nonirrigated

Range site: Eganroc soil—028BY049NV; Hyzen soil—028BY066NV; Hardzem soil—028BY063NV; Inclusion 1—none; Inclusion 2—028BY032NV; Inclusion 3—none

1370—Wardbay-Haunchee-Hardol association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Wardbay very gravelly loam, 30 to 75 percent slopes—40 percent
- Haunchee very gravelly loam, 15 to 50 percent slopes—30 percent
- Hardol very gravelly silt loam, 30 to 75 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Halacan very gravelly loam, 8 to 30 percent slopes—6 percent
- Inclusion 2: Hardol very gravelly silt loam, 30 to 75 percent slopes—5 percent
- Inclusion 3: Entic Cryumbrepts gravelly silt loam, 30 to 75 percent slopes—3 percent
- Inclusion 4: Rock outcrop—1 percent

Characteristics of the Wardbay Soil

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Smooth side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 40 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; pebbles, 60 percent

Depth: 0 to 18 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 to 45 inches
Texture: Extremely cobbly silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 45 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 40 to 60 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.5 inches
Water-supplying capacity: 10 to 15 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—3; wind erodibility group—6
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic
Position on landscape: Convex side slopes of mountains
Parent material: Residuum derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 8,500 to 10,000 feet
Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent
Depth: 0 to 5 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 11 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Hardol Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Concave side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 30 to 75 percent
Elevation: 8,500 to 10,000 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, needlegrass

Climatic Data

Average annual precipitation: About 20 inches
Average annual air temperature: About 40 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 20 percent; pebbles, 20 percent
Depth: 0 to 12 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Mildly alkaline

Depth: 12 to 33 inches
Texture: Extremely gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Mildly alkaline

Depth: 33 to 60 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Moderately alkaline

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 5.0 inches
Water-supplying capacity: 11 to 14 inches
Runoff: Rapid
Hydrologic group: B
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6
Hazard of erosion: By water—high; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic
Position on landscape: Crests of mountains
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Concave side slopes of mountains
Distinctive present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Entic Cryumbrepts, loamy-skeletal, mixed
Position on landscape: Concave side slopes of mountains
Distinctive present vegetation: Erigonum, Letterman needlegrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains
Distinctive present vegetation: None

Interpretive Groups

Capability classification: Wardbay, Haunchee, and Hardol soils—VIIs, nonirrigated
Range site: Wardbay soil—028BY070NV; Haunchee soil—028BY043NV; Hardol soil—028BY085NV; Inclusion 1—028BY048NV; Inclusion 2—28BY042NV; Inclusion 3—028BY051NV; Inclusion 4—none

1372—Wardbay-Hardol-Adobe association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Wardbay very gravelly loam, 15 to 50 percent slopes—40 percent
 - Hardol very gravelly silt loam, 15 to 30 percent slopes—30 percent
 - Adobe very gravelly silt loam, 15 to 50 percent slopes—15 percent
- ##### *Contrasting inclusions:*
- Inclusion 1: Haunchee very cobbly loam, 15 to 50 percent slopes—7 percent
 - Inclusion 2: Halacan very gravelly loam, 8 to 30 percent slopes—5 percent
 - Inclusion 3: Cumulic Haplaquolls silt loam, 4 to 15 percent slopes—2 percent
 - Inclusion 4: Rock outcrop—1 percent

Characteristics of the Wardbay Soil

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: Smooth side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 8,000 to 10,000 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches
Average annual air temperature: About 40 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; pebbles, 60 percent
Depth: 0 to 18 inches
Texture: Very gravelly loam

Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 to 45 inches
Texture: Extremely cobbly silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 45 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 40 to 60 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.5 inches
Water-supplying capacity: 10 to 15 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—3; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Hardol Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Concave side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 30 percent
Elevation: 8,000 to 10,000 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, needlegrass

Climatic Data

Average annual precipitation: About 20 inches
Average annual air temperature: About 40 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 20 percent; pebbles, 20 percent
Depth: 0 to 12 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable

Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 to 33 inches
Texture: Extremely gravelly silt loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 33 to 60 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 5.0 inches
Water-supplying capacity: 11 to 14 inches
Runoff: Rapid
Hydrologic group: B
Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Adobe Soil

Classification: Lithic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Convex side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 8,000 to 10,000 feet
Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 85 percent
Depth: 0 to 5 inches
Texture: Very gravelly silt loam
Structure: Platy
Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 17 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 17 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains; adjacent to areas of rock outcrop

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Crests of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Cumulic Haplaquolls, fine, montmorillonitic, mesic

Position on landscape: Drainageways on mountains and areas adjacent to springs and seeps

Distinctive present vegetation: Nevada bluegrass, alpine timothy

Inclusion 4

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Wardbay, Hardol, and Adobe soils—VIIIs, nonirrigated

Range site: Wardbay soil—028BY070NV; Hardol soil—028BY085NV; Adobe soil—028BY027NV; Inclusion 1—028BY032NV; Inclusion 2—028BY048NV; Inclusion 3—028BY095NV; Inclusion 4—none

1374—Wardbay-Adobe-Hauchee association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Wardbay very gravelly loam, 30 to 75 percent slopes—35 percent
 - Adobe very gravelly silt loam, 30 to 75 percent slopes—30 percent
 - Hauchee very gravelly loam, 30 to 75 percent slopes—20 percent
- Contrasting inclusions:*
- Inclusion 1: Murial gravelly loam, 30 to 75 percent slopes—7 percent
 - Inclusion 2: Hardol very gravelly loam, 30 to 75 percent slopes—5 percent
 - Inclusion 3: Hackwood gravelly silt loam, 15 to 50 percent slopes—3 percent

Characteristics of the Wardbay Soil

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Smooth side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 40 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; pebbles, 60 percent

Depth: 0 to 18 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 to 45 inches
Texture: Extremely cobbly silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 45 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 40 to 60 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.5 inches
Water-supplying capacity: 10 to 15 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—3; wind erodibility group—6
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Adobe Soil

Classification: Lithic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Convex side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 30 to 75 percent
Elevation: 8,500 to 10,000 feet
Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 85 percent
Depth: 0 to 5 inches
Texture: Very gravelly silt loam
Structure: Platy

Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 5 to 17 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 17 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.5 inches
Water-supplying capacity: 9 to 11 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic
Position on landscape: Convex side slopes of mountains
Parent material: Residuum derived from limestone and dolomite
Slope range: 30 to 75 percent
Elevation: 8,500 to 10,000 feet
Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent
Depth: 0 to 5 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 11 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Cryochrepts, loamy-skeletal, mixed
Position on landscape: Concave, north-facing side slopes of mountains
Distinctive present vegetation: Engelmann spruce, mountain gooseberry, mountain brome, Columbia needlegrass

Inclusion 2

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Concave side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, needlegrass

Inclusion 3

Classification: Pachic Cryoborolls, fine-loamy, mixed
Position on landscape: Concave, north-facing side slopes of mountains
Distinctive present vegetation: Quaking aspen, mountain brome, slender wheatgrass

Interpretive Groups

Capability classification: Wardbay, Adobe, and Haunchee soils—VIIIs, nonirrigated
Range site: Wardbay soil—028BY070NV; Adobe soil—

028BY027NV; Haunchee soil—028BY043NV;
 Inclusion 1—028BY072NV; Inclusion 2—
 028BY085NV; Inclusion 3—028BY067NV

1380—Cavehill-Hardol-Eganroc association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Cavehill cobbly loam, 30 to 75 percent slopes—40 percent
- Hardol very gravelly silt loam, 30 to 75 percent slopes—25 percent
- Eganroc very stony loam, 30 to 75 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rock outcrop—7 percent
- Inclusion 2: Haunchee very cobbly loam, 30 to 75 percent slopes—3 percent
- Inclusion 3: Hardzem channery loam, 30 to 75 percent slopes—3 percent
- Inclusion 4: Haunchee very gravelly loam, 15 to 50 percent slopes—2 percent

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Convex, north-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 9,000 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—7

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hardol Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 9,000 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 20 inches

Average annual air temperature: About 40 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 20 percent; pebbles, 20 percent

Depth: 0 to 12 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 33 inches

Texture: Extremely gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 33 to 60 inches

Texture: Extremely gravelly loam

Structure: Massive

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 11 to 14 inches

Runoff: Rapid

Hydrologic group: B

Erosion factors (surface layer): K value—.28; T value—5; wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Eganroc Soil

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Upper, convex, north-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 9,000 feet

Dominant present vegetation: White fir, limber pine, bristlecone pine

Climatic Data

Average annual precipitation: About 25 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 30 percent; pebbles, 30 percent

Depth: 0 to 9 inches

Texture: Very stony loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 34 inches

Texture: Extremely gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 34 inches

Texture: Dolomite

Soil and Water Features

Depth to bedrock: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 3.5 inches

Water-supplying capacity: 10 to 13.5 inches

Runoff: Very rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Side slopes of mountains; adjacent to areas of rock outcrop

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Typic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: Upper, north-facing side slopes of mountains

Distinctive present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Inclusion 4

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Cavehill, Hardol, and Eganroc soils—VIIIs, nonirrigated

Range site: Cavehill soil—028BY058NV; Hardol soil—028BY042NV; Eganroc soil—028BY049NV; Inclusion 1—none; Inclusion 2—028BY032NV; Inclusion 3—028BY063NV; Inclusion 4—028BY043NV

1383—Cavehill-Rock outcrop association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Cavehill cobbly loam, 30 to 75 percent slopes—45 percent
- Cavehill extremely cobbly loam, 30 to 75 percent slopes—30 percent
- Rock outcrop—10 percent

Contrasting inclusions:

- Inclusion 1: Pookaloo very gravelly loam, 30 to 75 percent slopes—5 percent
- Inclusion 2: Cavehill very gravelly silt loam, 30 to 75 percent slopes—5 percent
- Inclusion 3: Haunchee very cobbly loam, 30 to 75 percent slopes—3 percent
- Inclusion 4: Hardzem channery loam, 30 to 75 percent slopes—2 percent

Characteristics of the Cobbly Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—7

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Extremely Cobbly Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Singleleaf pinyon, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Extremely cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—8

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of mountains

Kind of rock: Limestone and dolomite

Contrasting Inclusions**Inclusion 1**

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Lower, south-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Lower, north-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Upper, south-facing side slopes of mountains

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Typic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: Upper, north-facing side slopes of mountains

Distinctive present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Interpretive Groups

Capability classification: Cavehill soils—VIIIs, nonirrigated; Rock outcrop—VIIIIs

Range site: The cobbly Cavehill soil—028BY058NV; the extremely cobbly Cavehill soil—028BY076NV; Rock outcrop—none; Inclusion 1—028BY060NV; Inclusion 2—028BY062NV; Inclusion 3—028BY032NV; Inclusion 4—028BY063NV

1384—Cavehill-Haunchee association**Map Unit Setting**

Position on landscape: Mountains

Composition

Major components:

- Cavehill cobbly loam, 30 to 75 percent slopes—35 percent
- Haunchee very cobbly loam, 30 to 75 percent slopes—30 percent
- Cavehill extremely cobbly loam, 30 to 75 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Cavehill very gravelly silt loam, 30 to 75 percent slopes—5 percent
- Inclusion 2: Calciorthidic Haploxerolls silt loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Xine gravelly loam, 30 to 50 percent slopes—5 percent

Characteristics of the Cobbly Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Lower side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,000 to 8,500 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—7

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic
Position on landscape: Upper side slopes of mountains
Parent material: Residuum derived from limestone and dolomite
Slope range: 30 to 75 percent
Elevation: 8,000 to 9,000 feet
Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches
Texture: Very cobbly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 11 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Extremely Cobbly Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: Upper side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 30 to 75 percent
Elevation: 8,500 to 9,000 feet
Dominant present vegetation: Singleleaf pinyon, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches
Texture: Extremely cobbly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 27 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 11 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Concave, north-facing side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Calciorthidic Haploxerolls, fine-loamy, mixed, frigid

Position on landscape: Narrow drainageways on mountains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave, north-facing side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Cavehill soils and the Haunchee soil—Vlls, nonirrigated

Range site: The cobbly Cavehill soil—028BY058NV; Haunchee soil—028BY032NV; the extremely cobbly Cavehill soil—028BY076NV; Inclusion 1—028BY062NV; Inclusion 2—028BY045NV; Inclusion 3—028BY088NV

1385—Cavehill-Hyzen-Xine association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Cavehill cobbly loam, 15 to 50 percent slopes—40 percent
- Hyzen extremely stony loam, 15 to 50 percent slopes—30 percent
- Xine very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Cavehill extremely cobbly loam, 15 to 50 percent slopes—7 percent
- Inclusion 2: Grink very stony loam, 15 to 50 percent slopes—5 percent

- Inclusion 3: Rock outcrop—3 percent

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 15 to 50 percent

Elevation: 7,000 to 7,800 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf, mountainmahogany

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent

Depth: 0 to 15 inches

Texture: Cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Hyzen Soil

Classification: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: South-facing crests and side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 7,000 to 7,800 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 20 percent; cobbles, 10 percent; pebbles, 5 percent

Depth: 0 to 2 inches
Texture: Extremely stony loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 12 inches
Texture: Extremely stony loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 12 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 6 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 to 1.0 inch
Water-supplying capacity: 6 to 9 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.17; T value—1; wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Xine Soil

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Concave, north-facing side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 7,000 to 7,800 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 40 percent

Depth: 0 to 7 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 7 to 35 inches
Texture: Very cobbly loam
Structure: Massive
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 35 inches
Texture: Weathered limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid
Available water capacity: 3.0 to 4.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Upper crests and side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Inclusion 2

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper side slopes of mountains

Distinctive present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Cavehill, Hyzen, and Xine soils—VIIIs, nonirrigated

Range site: Cavehill soil—028BY058NV; Hyzen soil—028BY060NV; Xine soil—028BY088NV; Inclusion 1—028BY076NV; Inclusion 2—028BY043NV; Inclusion 3—none

1390—Chen-Segura-Mclvey association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Chen very gravelly loam, 15 to 30 percent slopes—40 percent
- Segura very cobbly loam, 15 to 50 percent slopes—30 percent
- Mclvey gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Mclvey very gravelly loam, 30 to 50 percent slopes—7 percent
- Inclusion 2: Hutchley very gravelly sandy loam, 8 to 30 percent slopes—5 percent
- Inclusion 3: Pioche extremely stony loam, 15 to 50 percent slopes—2 percent

- Inclusion 4: Cumulic Haplaquolls silt loam, 4 to 8 percent slopes—1 percent

Characteristics of the Chen Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Crests of mountains

Parent material: Residuum derived from andesite and conglomerate and some loess

Slope range: 15 to 30 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 70 percent

Depth: 0 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 7 to 17 inches

Texture: Extremely gravelly clay

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 17 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 12 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid
Position on landscape: Convex side slopes of mountains
Parent material: Residuum and colluvium derived from andesite, quartzite, and conglomerate
Slope range: 15 to 50 percent
Elevation: 7,000 to 8,500 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 45 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Sandy clay loam

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches

Texture: Quartzite

Soil and Water Features

Depth to bedrock: 7 to 14 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 1.5 inches

Water-supplying capacity: 6.5 to 8 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from andesite and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 5 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 5.0 to 7.5 inches

Water-supplying capacity: 10 to 18 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.15; T value—5;
wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Argixerolls, clayey-skeletal,
montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush,
bluebunch wheatgrass

Inclusion 2

Classification: Lithic Argixerolls, loamy-skeletal, mixed,
frigid

Position on landscape: Crests and upper, convex side
slopes of mountains

Distinctive present vegetation: Low sagebrush, black
sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Lithic Argixerolls, clayey-skeletal,
montmorillonitic, mesic

Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah
juniper, mountain big sagebrush, bluebunch
wheatgrass

Inclusion 4

Classification: Cumulic Haplaquolls, fine-loamy, mixed,
frigid

Position on landscape: Narrow drainageways on
mountains

Distinctive present vegetation: Nevada bluegrass, alpine
timothy

Interpretive Groups

Capability classification: Chen and Segura soils—VIIIs,
McIvey soil—VIIe, nonirrigated

Range site: Chen soil—028BY037NV; Segura soil—
028BY087NV; McIvey soil—028BY030NV; Inclusion
1—028BY015NV; Inclusion 2—028BY034NV;
Inclusion 3—028BY062NV; Inclusion 4—
028BY095NV

1391—Chen-Tusel association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Chen very gravelly loam, 8 to 30 percent slopes—45 percent

- Tusel cobbly loam, 8 to 15 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Segura very cobbly loam, 8 to 30 percent slopes—9 percent

- Inclusion 2: Hackwood gravelly silt loam, 4 to 15 percent slopes—3 percent

- Inclusion 3: Rock outcrop—2 percent

- Inclusion 4: Cumulic Haplaquolls silt loam, 2 to 8 percent slopes—1 percent

Characteristics of the Chen Soil

Classification: Lithic Argixerolls, clayey-skeletal,
montmorillonitic, frigid

Position on landscape: Convex side slopes of mountains

Parent material: Residuum derived from andesite and
conglomerate and some loess

Slope range: 8 to 30 percent

Elevation: 8,000 to 9,000 feet

Dominant present vegetation: Low sagebrush, bluebunch
wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles,
15 percent; pebbles, 70 percent

Depth: 0 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 7 to 17 inches

Texture: Extremely gravelly clay

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 17 inches

Texture: Conglomerate

Soil and Water Features

Depth to bedrock: 12 to 20 inches

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 9 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Tusel Soil

Classification: Argic Pachic Cryoborolls, loamy-skeletal, mixed
Position on landscape: Concave side slopes of mountains
Parent material: Residuum and colluvium derived from quartzite and conglomerate
Slope range: 8 to 15 percent
Elevation: 8,000 to 9,000 feet
Dominant present vegetation: Mountain big sagebrush, mountain brome, Letterman needlegrass

Climatic Data

Average annual precipitation: About 17 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 50 percent
Depth: 0 to 13 inches
Texture: Cobbly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm
Depth: 13 to 42 inches
Texture: Extremely gravelly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 42 inches
Texture: Quartzite

Soil and Water Features

Depth to bedrock: 40 to 60 inches
Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 4.0 to 5.0 inches
Water-supplying capacity: 12 to 20 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.20; T value—3; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Argixerolls, loamy, mixed, frigid
Position on landscape: Convex side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Inclusion 2

Classification: Pachic Cryoborolls, fine-loamy, mixed
Position on landscape: Concave side slopes of mountains
Distinctive present vegetation: Quaking aspen, mountain brome, slender wheatgrass

Inclusion 3

Position on landscape: Crests and side slopes of mountains
Distinctive present vegetation: None

Inclusion 4

Classification: Cumulic Haplaquolls, fine, montmorillonitic, frigid
Position on landscape: Drainageways and areas adjacent to springs and seeps on mountains
Distinctive present vegetation: Nevada bluegrass, alpine timothy

Interpretive Groups

Capability classification: Chen and Tusel soils—VIIIs, nonirrigated
Range site: Chen soil—028BY037NV; Tusel soil—028BY029NV; Inclusion 1—028BY087NV; Inclusion 2—028BY067NV; Inclusion 3—none; Inclusion 4—028BY095NV

1392—Chen-McIvey-Birchcreek association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Chen very gravelly loam, 4 to 15 percent slopes—45 percent

- McIvey gravelly loam, 4 to 15 percent slopes—20 percent
- Birchcreek very cobbly loam, 4 to 15 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Suak very stony loam, 8 to 30 percent slopes—10 percent
- Inclusion 2: Segura very cobbly loam, 4 to 15 percent slopes—5 percent

Characteristics of the Chen Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Crests of mountains

Parent material: Residuum derived from andesite and conglomerate and some loess

Slope range: 4 to 15 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 70 percent

Depth: 0 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 7 to 17 inches

Texture: Extremely gravelly clay

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 17 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 12 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from andesite and conglomerate

Slope range: 4 to 15 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 5 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 5 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Very hard, very firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—7
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Characteristics of the Birchcreek Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Slightly concave side slopes of mountains
Parent material: Residuum and colluvium derived from andesite and conglomerate
Slope range: 4 to 15 percent
Elevation: 7,500 to 8,500 feet
Dominant present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 10 percent; pebbles, 20 percent

Depth: 0 to 3 inches
Texture: Very cobbly loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches
Texture: Very cobbly clay loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 10 to 28 inches
Texture: Very cobbly clay

Structure: Prismatic
Consistence: Hard, firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 28 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Slow
Available water capacity: 1.9 to 2.7 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: High
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Convex side slopes of mountains
Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Argixerolls, loamy, mixed, frigid
Position on landscape: Convex side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Interpretive Groups

Capability classification: Chen and Birchcreek soils—VIIIs, McIvey soil—VIc, nonirrigated
Range site: Chen soil—028BY037NV; McIvey soil—028BY030NV; Birchcreek soil—028BY046NV; Inclusion 1—028BY032NV; Inclusion 2—028BY087NV

1400—Suak-Segura-McIvey association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Suak very stony loam, 15 to 50 percent slopes—40 percent
- Segura very cobbly loam, 15 to 50 percent slopes—30 percent
- McIvey very gravelly loam, 30 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Cassiro stony loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Rubble land, 15 to 50 percent slopes—5 percent
- Inclusion 3: Cropper very cobbly loam, 15 to 50 percent slopes—3 percent
- Inclusion 4: Chen very gravelly loam, 15 to 50 percent slopes—2 percent

Characteristics of the Suak Soil

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Slightly convex side slopes of mountains

Parent material: Residuum and colluvium derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 35 percent

Depth: 0 to 10 inches

Texture: Very stony loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 10 to 25 inches

Texture: Extremely gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 25 inches

Texture: Quartzite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 0.5 inch to 2.0 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.05; T value—2; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Convex side slopes of mountains

Parent material: Residuum and colluvium derived from andesite, quartzite, or conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 45 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches

Texture: Sandy clay loam

Structure: Angular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 inches
Texture: Quartzite

Soil and Water Features

Depth to bedrock: 7 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 6.5 to 8 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Concave side slopes of mountains
Parent material: Colluvium derived from andesite, quartzite, or conglomerate
Slope range: 30 to 50 percent
Elevation: 7,500 to 8,500 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 43 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches
Texture: Very gravelly clay loam
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches
Texture: Extremely cobbly clay
Structure: Angular blocky

Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.05; T value—5; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: Lower, concave side slopes of mountains
Distinctive present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Position on landscape: Side slopes of mountains
Distinctive present vegetation: None

Inclusion 3

Classification: Lithic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: South-facing side slopes of mountains
Distinctive present vegetation: Singleleaf pinyon, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Inclusion 4

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Crests and convex side slopes of mountains
Distinctive present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Interpretive Groups

Capability classification: Suak, Segura, and McIvey soils—VIIs, nonirrigated
Range site: Suak soil—028BY032NV; Segura soil—028BY087NV; McIvey soil—028BY015NV; Inclusion 1—028BY046NV; Inclusion 2—none; Inclusion 3—028BY076NV; Inclusion 4—028BY037NV

1430—Hardzem-Haunchee-Wardbay association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Hardzem channery loam, 50 to 75 percent slopes—50 percent
- Haunchee very cobbly loam, 30 to 75 percent slopes—20 percent
- Wardbay very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Hardol very gravelly silt loam, 30 to 50 percent slopes—8 percent
- Inclusion 2: Pachic Haploxerolls gravelly silt loam, 8 to 30 percent slopes—5 percent
- Inclusion 3: Rock outcrop—2 percent

Characteristics of the Hardzem Soil

Classification: Typic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: North-facing side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and shale

Slope range: 50 to 75 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 25 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 1 inch

Texture: Channery loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 21 inches

Texture: Extremely channery clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 52 inches

Texture: Fractured, weathered shale

Depth: 52 inches

Texture: Unweathered shale

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 12 to 18 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: South-facing side slopes of mountains

Parent material: Residuum derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Very cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 11 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Wardbay Soil

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: Smooth side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 8,500 to 10,000 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches
Average annual air temperature: About 40 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; pebbles, 60 percent

Depth: 0 to 18 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 18 to 45 inches
Texture: Extremely cobbly silt loam

Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 45 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 40 to 60 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.5 inches
Water-supplying capacity: 10 to 15 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.10; T value—3; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Calcic Pachic Cryoborolls, loamy-skeletal, carbonatic
Position on landscape: Concave side slopes of mountains
Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Pachic Haploxerolls, fine-loamy, mixed, frigid
Position on landscape: Lower, concave side slopes of mountains
Distinctive present vegetation: Quaking aspen, mountain brome, slender wheatgrass

Inclusion 3

Position on landscape: Crests and side slopes of mountains
Distinctive present vegetation: None

Interpretive Groups

Capability classification: Hardzem soil—VIIe, Haunchee and Wardbay soils—VIIs, nonirrigated
Range site: Hardzem soil—028BY063NV; Haunchee soil—028BY032NV; Wardbay soil—028BY070NV; Inclusion 1—028BY042NV; Inclusion 2—028BY067NV; Inclusion 3—none

1431—Hardzem-Hackwood-Guiser association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Hardzem channery loam, 50 to 75 percent slopes—35 percent
- Hackwood gravelly silt loam, 30 to 50 percent slopes—30 percent
- Guiser extremely cobbly loam, 30 to 75 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Rubble land, 30 to 75 percent slopes—8 percent
- Inclusion 2: Argic Lithic Cryoborolls extremely gravelly loam, 30 to 75 percent slopes—3 percent
- Inclusion 3: Suak very stony loam, 30 to 50 percent slopes—2 percent
- Inclusion 4: Tusel cobbly loam, 30 to 50 percent slopes—2 percent

Characteristics of the Hardzem Soil

Classification: Typic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: Slightly convex side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and shale

Slope range: 50 to 75 percent

Elevation: 8,500 to 10,500 feet

Dominant present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 25 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 1 inch

Texture: Channery loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 1 to 21 inches

Texture: Extremely channery clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 21 to 52 inches

Texture: Fractured, weathered shale

Depth: 52 inches

Texture: Unweathered shale

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 12 to 18 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Hackwood Soil

Classification: Pachic Cryoborolls, fine-loamy, mixed

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from quartzite and conglomerate and some loess

Slope range: 30 to 50 percent

Elevation: 8,500 to 10,500 feet

Dominant present vegetation: Quaking aspen, mountain brome, slender wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 22 inches

Texture: Gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 22 to 31 inches

Texture: Gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 31 to 60 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 6.0 to 9.0 inches

Water-supplying capacity: 16 to 20 inches

Runoff: Rapid

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Guiser Soil

Classification: Mollic Cryoboralfs, loamy-skeletal, mixed

Position on landscape: Slightly concave side slopes of mountains

Parent material: Colluvium derived from quartzite and conglomerate

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,500 feet

Dominant present vegetation: White fir, quaking aspen, spike-fescue, mountain brome, slender wheatgrass

Climatic Data

Average annual precipitation: About 23 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: 1-inch-thick layer of partially decomposed needles and twigs

Depth: 0 to 7 inches

Texture: Extremely cobbly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 7 to 15 inches

Texture: Extremely cobbly coarse sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 36 inches

Texture: Extremely cobbly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 36 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 20 to 25 inches

Runoff: Rapid

Hydrologic group: B

Erosion factors (surface layer): K value—.05; T value—3; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Position on landscape: Side slopes of mountains

Distinctive present vegetation: None

Inclusion 2

Classification: Argic Lithic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Crests of mountains

Distinctive present vegetation: Low sagebrush, black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Lower, convex side slopes of mountains

Distinctive present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Argic Pachic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, mountain brome, Letterman needlegrass

Interpretive Groups

Capability classification: Hardzem soil—VIIe, Hackwood and Guiser soils—VIIs, nonirrigated

Range site: Hardzem soil—028BY063NV; Hackwood soil—028BY067NV; Guiser soil—028BY055NV; Inclusion 1—none; Inclusion 2—028BY038NV; Inclusion 3—028BY032NV; Inclusion 4—028BY029NV

1451—Birchcreek-Segura-Chen association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Birchcreek very cobbly loam, 8 to 30 percent slopes—45 percent
- Segura very cobbly loam, 15 to 50 percent slopes—25 percent
- Chen very gravelly loam, 15 to 30 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: McIvey very gravelly loam, 15 to 50 percent slopes—4 percent
- Inclusion 2: Pioche extremely stony loam, 15 to 50 percent slopes—4 percent
- Inclusion 3: McIvey gravelly loam, 4 to 15 percent slopes—4 percent
- Inclusion 4: Rock outcrop—3 percent

Characteristics of the Birchcreek Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Parent material: Residuum and colluvium derived from andesite and conglomerate

Slope range: 8 to 30 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 10 percent; pebbles, 20 percent

Depth: 0 to 3 inches

Texture: Very cobbly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 3 to 10 inches

Texture: Very cobbly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 10 to 28 inches

Texture: Very cobbly clay

Structure: Prismatic

Consistence: Hard, firm

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 28 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.9 to 2.7 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Segura Soil

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from andesite, quartzite, and conglomerate

Slope range: 15 to 50 percent

Elevation: 7,500 to 8,500 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 45 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 30 percent; pebbles, 10 percent

Depth: 0 to 3 inches
Texture: Very cobbly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches
Texture: Sandy clay loam
Structure: Angular blocky
Consistence: Slightly hard, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 inches
Texture: Quartzite

Soil and Water Features

Depth to bedrock: 7 to 14 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 1.5 inches
Water-supplying capacity: 6.5 to 8 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Chen Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Crests and convex side slopes of mountains
Parent material: Residuum derived from andesite and conglomerate and some loess
Slope range: 15 to 30 percent
Elevation: 7,500 to 8,500 feet
Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 70 percent

Depth: 0 to 7 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 7 to 17 inches
Texture: Extremely gravelly clay
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 17 inches
Texture: Andesite

Soil and Water Features

Depth to bedrock: 12 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 7 to 9 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Concave side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Position on landscape: Lower side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Concave side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Birchcreek soil—VIs, Segura and Chen soils—VIIIs, nonirrigated

Range site: Birchcreek soil—028BY046NV; Segura soil—028BY087NV; Chen soil—028BY037NV; Inclusion 1—028BY015NV; Inclusion 2—028BY062NV; Inclusion 3—028BY030NV; Inclusion 4—none

1460—Unsel gravelly fine sandy loam, 2 to 8 percent slopes

Map Unit Setting

Position on landscape: Fan skirts

Composition

Major component:

- Unsel gravelly fine sandy loam, 2 to 8 percent slopes—85 percent

Contrasting inclusions:

- Inclusion 1: Typic Calciorthids gravelly sandy loam, 2 to 8 percent slopes—7 percent
- Inclusion 2: Durixerollic Calciorthids gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Sycomat sandy loam, 0 to 4 percent slopes—2 percent
- Inclusion 4: Typic Paleorthids gravelly sandy loam, 2 to 8 percent slopes—2 percent

Characteristics of the Unsel Soil

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Shadscale, galleta, Bailey greasewood, bud sagebrush

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 4 inches

Texture: Gravelly fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 14 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 22 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, brittle

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 22 to 60 inches

Texture: Very gravelly loamy sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 3.0 to 5.0 inches

Water-supplying capacity: 5 to 8 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.20; T value—3; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Typic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Shadscale, Indian ricegrass

Inclusion 2

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Duric Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts adjacent to fluvies

Distinctive present vegetation: Shadscale, black greasewood, bottlebrush squirreltail

Inclusion 4

Classification: Typic Paleorthids, coarse-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants adjacent to fan skirts

Distinctive present vegetation: Shadscale, galleta, Bailey greasewood, bud sagebrush

Interpretive Groups

Capability classification: Unsel soil—IIIe, irrigated, VIIc, nonirrigated

Range site: Unsel soil—029XY017NV; Inclusion 1—028BY017NV; Inclusion 2—028BY010NV; Inclusion 3—028BY074NV; Inclusion 4—029XY017NV

1480—Amelar-Bobs association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Amelar very gravelly loam, 2 to 8 percent slopes—65 percent
- Bobs very gravelly loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Pern silt loam, 2 to 8 percent slopes—6 percent
- Inclusion 2: Urmafot gravelly loam, 2 to 8 percent slopes—4 percent
- Inclusion 3: Belmill gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Cumulic Haplaquolls silt loam, 0 to 4 percent slopes—2 percent

Characteristics of the Amelar Soil

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Concave summits of fan piedmont remnants

Parent material: Alluvium derived from limestone and sandstone

Slope range: 2 to 8 percent

Elevation: 6,800 to 7,800 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 6 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 6 to 15 inches

Texture: Very cobbly silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 15 to 60 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 5.0 to 8.0 inches

Water-supplying capacity: 12 to 14 inches

Runoff: Rapid

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Bobs Soil

Classification: Aridic Petrocalcic Palexerolls, loamy, carbonatic, frigid, shallow
Position on landscape: Lower fan piedmont remnants
Parent material: Alluvium derived from limestone and some loess high in content of ash
Slope range: 2 to 8 percent
Elevation: 6,800 to 7,800 feet
Dominant present vegetation: Big sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 12 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Pebbles, 30 percent
Depth: 0 to 3 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 3 to 14 inches
Texture: Gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 14 inches
Texture: Indurated petrocalcic material

Soil and Water Features

Depth to a hardpan: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.0 inches
Water-supplying capacity: 7 to 8 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 2

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic
Position on landscape: Fan piedmont remnants
Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass

Inclusion 4

Classification: Cumulic Haplaquolls, fine, montmorillonitic, mesic
Position on landscape: Axial-stream flood plains adjacent to fan piedmont remnants
Distinctive present vegetation: Bluegrass, sedge, rush

Interpretive Groups

Capability classification: Amelar and Bobs soils—VIIIs, nonirrigated
Range site: Amelar soil—028BY088NV; Bobs soil—028BY094NV; Inclusion 1—028BY003NV; Inclusion 2—028BY006NV; Inclusion 3—028BY086NV; Inclusion 4—028BY001NV

1491—Pyrat-Palinor-Tulase association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Pyrat gravelly sandy loam, 2 to 8 percent slopes—35 percent
- Palinor gravelly loam, 2 to 8 percent slopes—30 percent
- Tulase silt loam, 0 to 4 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Biken very gravelly fine sandy loam, 4 to 15 percent slopes—10 percent
- Inclusion 2: Biken very gravelly fine sandy loam, 8 to 30 percent slopes—3 percent

- Inclusion 3: Urmafot gravelly loam, 4 to 15 percent slopes—1 percent
- Inclusion 4: Xerollic Camborthids very gravelly loam, 2 to 4 percent slopes—1 percent

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic
Position on landscape: Summits of slightly concave fan piedmont remnants
Parent material: Mixed alluvium
Slope range: 2 to 8 percent
Elevation: 5,900 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 49 degrees F
Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches
Texture: Gravelly sandy loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches
Texture: Very gravelly sandy loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches
Texture: Very gravelly loam
Structure: Massive
Consistence: Very hard, firm
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches
Texture: Very gravelly sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches
Texture: Extremely gravelly loamy sand
Structure: Massive
Consistence: Hard, very friable

Reaction: Strongly alkaline
Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 5.0 inches
Water-supplying capacity: 7 to 12 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow
Position on landscape: Summits of slightly convex fan piedmont remnants
Parent material: Alluvium derived from limestone and dolomite
Slope range: 2 to 8 percent
Elevation: 5,900 to 6,800 feet
Dominant present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches
Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Hard, firm
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic
Position on landscape: Inset fans
Parent material: Silty alluvium derived from mixed rocks and some volcanic ash
Slope range: 0 to 4 percent
Elevation: 5,900 to 6,800 feet
Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches
Texture: Silt loam
Structure: Platy
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches
Texture: Silt loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 9.0 to 12.0 inches
Water-supplying capacity: 8 to 10 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Convex side slopes of fan piedmont remnants that have a rock core
Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Inclusion 2

Classification: Xerollic Calciorthids, loamy-skeletal, mixed, mesic, shallow
Position on landscape: Upper, convex side slopes of fan piedmont remnants that have a rock core
Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Orthidic Durixerolls, loamy, mixed, mesic, shallow
Position on landscape: Upper fan piedmont remnants adjacent to mountains
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 4

Classification: Xerollic Camborhids, fine-loamy, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Big sagebrush, Thurber needlegrass

Interpretive Groups

Capability classification: Tulase soil—Ile, irrigated; Pyrat and Palinor soils—VIIIs, Tulase soil—VIc, nonirrigated
Range site: Pyrat soil—028BY010NV; Palinor soil—028BY011NV; Tulase soil—028BY045NV; Inclusion

1—028BY083NV; Inclusion 2—028BY060NV;
Inclusion 3—028BY006NV; Inclusion 4—
028BY007NV

1492—Pyrat-Shabliss-Linoyer association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Pyrat gravelly sandy loam, 0 to 4 percent slopes—40 percent
- Shabliss gravelly loam, 0 to 4 percent slopes—25 percent
- Linoyer very fine sandy loam, 0 to 4 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Tulase silt loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Parisa gravelly loam, 0 to 4 percent slopes—4 percent
- Inclusion 3: Dewar gravelly silt loam, 0 to 4 percent slopes—3 percent
- Inclusion 4: Heist silt loam, 0 to 4 percent slopes—3 percent

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Shabliss Soil

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium with a mantle of loess high in content of volcanic ash

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 13 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 13 to 55 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.0 inches

Water-supplying capacity: 5.5 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.37; T value—1; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Linoyer Soil

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Very fine sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 60 inches

Texture: Silt loam

Structure: Prismatic

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 11.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—3

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans adjacent to fluves

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Xerollic Durargids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, bluebunch wheatgrass, Thurber needlegrass, basin wildrye

Inclusion 4

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Linoyer soil—IIIe, irrigated; Pyrat and Shabliss soils—VIIs, Linoyer soil—VIe, nonirrigated

Range site: Pyrat soil—028BY010NV; Shabliss soil—028BY080NV; Linoyer soil—028BY013NV; Inclusion 1—028BY045NV; Inclusion 2—028BY010NV; Inclusion 3—025XY019NV; Inclusion 4—028BY084NV

1493—Pyrat-Parisa-Tulase association**Map Unit Setting**

Position on landscape: Fan piedmonts and fan skirts

Composition

Major components:

- Pyrat gravelly sandy loam, 2 to 8 percent slopes—35 percent
- Parisa gravelly loam, 2 to 8 percent slopes—30 percent
- Tulase silt loam, 0 to 4 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Xerollic Camborthids very gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 2: Durixerollic Camborthids gravelly loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Palinoz gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Shabliss gravelly loam, 2 to 8 percent slopes—2 percent

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan skirts

Parent material: Mixed alluvium

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Parisa Soil

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from limestone and dolomite

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 35 percent

Depth: 0 to 4 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 26 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 26 to 47 inches

Texture: Indurated duripan

Depth: 47 to 60 inches

Texture: Extremely gravelly coarse sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 3.0 inches

Water-supplying capacity: 5.5 to 8.5 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Xerollic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Durixerollic Camborthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian ricegrass, needleandthread

Inclusion 4

Classification: Haploxerollic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Tulasé soil—Ile, irrigated; Pyrat and Parisa soils—VIIc, Tulasé soil—VIc, nonirrigated

Range site: Pyrat soil—028BY010NV; Parisa soil—028BY010NV; Tulasé soil—028BY045NV; Inclusion 1—028BY013NV; Inclusion 2—028BY010NV; Inclusion 3—028BY011NV; Inclusion 4—028BY080NV

1494—Pyrat-McConnel association

Map Unit Setting

Position on landscape: Beach plains

Composition

Major components:

- Pyrat gravelly sandy loam, 2 to 4 percent slopes—50 percent
 - McConnel gravelly fine sandy loam, 2 to 4 percent slopes—35 percent
- Contrasting inclusions:*
- Inclusion 1: Sheffit silt loam, 2 to 4 percent slopes—10 percent

- Inclusion 2: Uwell silt loam, 2 to 4 percent slopes—5 percent

Characteristics of the Pyrat Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,200 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 6 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 6 to 17 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 17 to 27 inches

Texture: Very gravelly loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 27 to 39 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 39 to 60 inches

Texture: Extremely gravelly loamy sand

Structure: Massive

Consistence: Hard, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.15; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the McConnel Soil

Classification: Xerollic Camborthids, sandy-skeletal, mixed, mesic

Position on landscape: Offshore bars on beach plains

Parent material: Mixed alluvium over lacustrine beach sediments

Slope range: 2 to 4 percent

Elevation: 6,200 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, needleandthread

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 70 percent

Depth: 0 to 3 inches

Texture: Gravelly fine sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 11 inches

Texture: Sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 11 to 42 inches

Texture: Extremely gravelly coarse sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: More than 2 mmhos per cm

Depth: 42 to 60 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: More than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 4.0 to 4.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.32; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Low

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains adjacent to beach plains

Distinctive present vegetation: Black greasewood, big sagebrush, basin wildrye

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Beach plains adjacent to lake plains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Pyrat and McConnel soils—VIIIs, nonirrigated

Range site: Pyrat soil—028BY010NV; McConnel soil—028BY010NV; Inclusion 1—028BY028NV; Inclusion 2—028BY054NV

1510—Raph-Zimwala-Heist association**Map Unit Setting**

Position on landscape: Basin floors

Composition

Major components:

- Raph silt loam, 0 to 4 percent slopes—40 percent
- Zimwala silt loam, 0 to 2 percent slopes—25 percent
- Heist silt loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Uwell silt loam, 0 to 2 percent slopes—7 percent
- Inclusion 2: Uwell silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 3: Pyrat gravelly sandy loam, 0 to 4 percent slopes—2 percent
- Inclusion 4: Linoyer very fine sandy loam, 0 to 2 percent slopes—1 percent

Characteristics of the Raph Soil

Classification: Typic Camborthids, fine-loamy, mixed, mesic

Position on landscape: Lagoons on beach plains

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 5,900 to 6,400 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 120 days

Typical Profile

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 4 to 30 inches

Texture: Loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 30 to 42 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 42 to 60 inches

Texture: Stratified fine sandy loam to very gravelly coarse sand

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: Rare

Permeability: Moderate

Available water capacity: 7.0 to 9.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Zimwala Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,400 feet

Dominant present vegetation: Sickle saltbush, western wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 13 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 13 to 40 inches

Texture: Stratified silt loam to silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 40 to 60 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow over very slow

Available water capacity: 10.5 to 12.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Characteristics of the Heist Soil

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,900 to 6,400 feet

Dominant present vegetation: Winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 36 inches

Texture: Fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately rapid

Available water capacity: 6.0 to 7.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Beach plains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Beach plains

Distinctive present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Inclusion 3

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Offshore bars on beach plains

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Lagoons on beach plains

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Raph soil—VIIc, Zimwala soil—VIIc, Heist soil—VIc, nonirrigated

Range site: Raph soil—028BY009NV; Zimwala soil—028BY047NV; Heist soil—028BY084NV;

Inclusion 1—028BY045NV; Inclusion 2—

028BY054NV; Inclusion 3—028BY010NV; Inclusion

4—028BY013NV

1511—Hessing-Uwell-Zimwala association

Map Unit Setting

Position on landscape: Fan skirts and lake plains

Composition

Major components:

- Hessing silt loam, 0 to 2 percent slopes—40 percent
- Uwell silt loam, 0 to 2 percent slopes—30 percent
- Zimwala silt loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Heist silt loam, 0 to 2 percent slopes—5 percent
- Inclusion 2: Tulase silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 3: Linoyer very fine sandy loam, 0 to 2 percent slopes—2 percent

Characteristics of the Hessing Soil

Classification: Typic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Fan skirts

Parent material: Loess and silty alluvium over mixed alluvium

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 4 inches

Texture: Silt loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 4 to 15 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 15 to 31 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Depth: 31 to 60 inches

Texture: Stratified extremely gravelly coarse sand and extremely gravelly sand

Structure: Single grained

Consistence: Loose

Reaction: Moderately alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow over very rapid

Available water capacity: 5.5 to 7.0 inches

Water-supplying capacity: 6 to 8 inches

Runoff: Slow

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—3; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Characteristics of the Uwell Soil

Classification: Durorthidic Xeric Torriorthents, fine-silty, mixed (calcareous), mesic

Position on landscape: Lake plains adjacent to fan skirts

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 26 inches

Texture: Silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 26 to 60 inches

Texture: Silty clay loam

Structure: Prismatic

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 9.0 to 13.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Zimwala Soil

Classification: Typic Torriorthents, fine-silty, carbonatic, mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Sickie saltbush, western wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 13 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 13 to 40 inches

Texture: Stratified silt loam to silty clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: More than 16 mmhos per cm

Depth: 40 to 60 inches

Texture: Silty clay

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: More than 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow over very slow

Available water capacity: 10.5 to 12.0 inches

Water-supplying capacity: 8 to 11 inches

Runoff: Slow

Hydrologic group: C

Erosion factors (surface layer): K value—.43; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—high

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts adjacent to fluves

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Inclusion 3

Classification: Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Fan skirts

Distinctive present vegetation: Winterfat, Indian ricegrass

Interpretive Groups

Capability classification: Hessing soil—IIs, irrigated;

Hessing, Uwell, and Zimwala soils—VIIIs, nonirrigated

Range site: Hessing soil—028BY075NV; Uwell soil—028BY054NV; Zimwala soil—028BY047NV; Inclusion 1—028BY084NV; Inclusion 2—028BY045NV; Inclusion 3—028BY013NV

1520—Fax-Yody-Broland association**Map Unit Setting**

Position on landscape: Fan piedmonts

Composition**Major components:**

- Fax very cobbly coarse sandy loam, 4 to 30 percent slopes—40 percent
- Yody gravelly sandy loam, 2 to 8 percent slopes—25 percent
- Broland very gravelly loam, 2 to 8 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Aridic Durixerolls gravelly loam, 4 to 15 percent slopes—7 percent
- Inclusion 2: Durixerollic Camborthids gravelly loam, 2 to 8 percent slopes—3 percent
- Inclusion 3: Durorthidic Xeric Torriorthents silt loam, 8 to 30 percent slopes—3 percent
- Inclusion 4: Tulase silt loam, 0 to 4 percent slopes—2 percent

Characteristics of the Fax Soil

Classification: Aridic Durixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 4 to 30 percent

Elevation: 6,200 to 6,900 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 46 degrees F

Frost-free period: About 100 days

Typical Profile

Surface cover: Pebbles, 15 percent

Depth: 0 to 3 inches

Texture: Very cobbly coarse sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 12 inches

Texture: Very gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 12 to 22 inches

Texture: Very gravelly sandy clay loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 22 to 48 inches

Texture: Strongly cemented duripan

Soil and Water Features

Depth to a hardpan: 20 to 36 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—2; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,200 to 6,900 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Broland Soil

Classification: Haploxerollic Durargids, loamy-skeletal, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium derived from volcanic rock

Slope range: 2 to 8 percent

Elevation: 6,200 to 6,900 feet

Dominant present vegetation: Black sagebrush, Indian ricegrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent

Depth: 0 to 3 inches

Texture: Very gravelly loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 9 inches

Texture: Gravelly clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 16 inches

Texture: Extremely gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 to 19 inches

Texture: Extremely gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 19 to 40 inches

Texture: Strongly cemented duripan

Consistence: Extremely hard, extremely firm

Depth: 40 to 60 inches

Texture: Extremely gravelly coarse sand

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 6 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Durixerolls, clayey-skeletal, montmorillonitic, mesic, shallow

Position on landscape: Upper side slopes of fan piedmont remnants

Distinctive present vegetation: Singleleaf pinyon, Utah

juniper, mountain big sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Durixerollic Camborthids, fine-silty, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 3

Classification: Durorthidic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Lower side slopes of fan piedmont remnants

Distinctive present vegetation: Utah juniper, black sagebrush, needleandthread, Indian ricegrass

Inclusion 4

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Interpretive Groups

Capability classification: Yody soil—IIle, irrigated; Fax and Broland soils—VIIs, Yody soil—VIIs, nonirrigated

Range site: Fax soil—028BY086NV; Yody soil—028BY086NV; Broland soil—028BY089NV; Inclusion 1—028BY060NV; Inclusion 2—028BY003NV; Inclusion 3—028BY083NV; Inclusion 4—028BY045NV

1550—Haunchee-Muiral-Wardbay association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Haunchee very gravelly loam, 30 to 75 percent slopes—30 percent
- Muiral gravelly loam, 30 to 75 percent slopes—30 percent
- Wardbay very gravelly loam, 30 to 75 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Adobe very gravelly silt loam, 15 to 50 percent slopes—6 percent
- Inclusion 2: Hardzem channery loam, 30 to 75 percent slopes—6 percent
- Inclusion 3: Halacan very gravelly loam, 15 to 50 percent slopes—2 percent

- Inclusion 4: Rock outcrop—1 percent

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Convex, south-facing side slopes of mountains

Parent material: Residuum derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 16 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Rapid

Hydrologic group: D

Erosion factors (surface layer): K value—.15; T value—1; wind erodibility group—7

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Muiral Soil

Classification: Typic Cryochrepts, loamy-skeletal, mixed

Position on landscape: Concave, north-facing side slopes of mountains

Parent material: Residuum and colluvium derived from calcareous siltstone

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Engelmann spruce, mountain gooseberry, mountain brome, Columbia needlegrass

Climatic Data

Average annual precipitation: About 16 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 9 inches

Texture: Gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Medium acid

Salinity: Less than 2 mmhos per cm

Depth: 9 to 33 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 33 inches

Texture: Calcareous siltstone

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 3.0 to 4.0 inches

Water-supplying capacity: 10 to 14 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—moderate

Potential for frost action: Moderate

Characteristics of the Wardbay Soil

Classification: Pachic Calcixerolls, loamy-skeletal, carbonatic, frigid

Position on landscape: Smooth side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 40 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; pebbles, 60 percent

Depth: 0 to 18 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 18 to 45 inches

Texture: Extremely cobbly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 45 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 40 to 60 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.0 to 4.5 inches

Water-supplying capacity: 10 to 15 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.10; T value—3; wind erodibility group—6

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Upper, convex side slopes of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Typic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Lower, north-facing side slopes of mountains

Distinctive present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Inclusion 3

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic

Position on landscape: Crests of mountains

Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Haunchee and Wardbay soils—VIIIs, Muirai soil—VIIe, nonirrigated

Range site: Haunchee soil—028BY043NV; Muirai soil—028BY072NV; Wardbay soil—028BY070NV; Inclusion 1—028BY027NV; Inclusion 2—028BY063NV; Inclusion 3—028BY048NV; Inclusion 4—none

1560—Adobe-Haunchee-Hardzem association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Adobe very gravelly silt loam, 30 to 75 percent slopes—45 percent
- Haunchee very gravelly loam, 30 to 75 percent slopes—20 percent
- Hardzem channery loam, 30 to 75 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Wardbay very gravelly loam, 30 to 75 percent slopes—5 percent
- Inclusion 2: Hyzen extremely stony loam, 15 to 50 percent slopes—4 percent
- Inclusion 3: Muirai gravelly loam, 30 to 75 percent slopes—3 percent
- Inclusion 4: Halacan very gravelly loam, 15 to 50 percent slopes—3 percent

Characteristics of the Adobe Soil

Classification: Lithic Cryoborolls, loamy-skeletal, carbonatic

Position on landscape: Convex side slopes of mountains

Parent material: Residuum and colluvium derived from limestone and dolomite

Slope range: 30 to 75 percent

Elevation: 8,500 to 10,000 feet

Dominant present vegetation: Black sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 42 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 85 percent

Depth: 0 to 5 inches

Texture: Very gravelly silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 17 inches

Texture: Very gravelly silt loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 17 inches

Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 9 to 11 inches

Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1;
 wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Haunchee Soil

Classification: Cryic Lithic Rendolls, loamy-skeletal, carbonatic
Position on landscape: Convex, south-facing side slopes of mountains
Parent material: Residuum derived from limestone and dolomite
Slope range: 30 to 75 percent
Elevation: 8,500 to 10,000 feet
Dominant present vegetation: Curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches
Average annual air temperature: About 42 degrees F
Frost-free period: About 40 days

Typical Profile

Surface cover: Stones and boulders, 10 percent; cobbles, 10 percent; pebbles, 50 percent

Depth: 0 to 5 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 5 to 16 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 16 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 10 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 11 inches
Runoff: Rapid
Hydrologic group: D
Erosion factors (surface layer): K value—.15; T value—1;
 wind erodibility group—7
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Hardzem Soil

Classification: Typic Cryoboralfs, loamy-skeletal, mixed
Position on landscape: North-facing side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and shale
Slope range: 30 to 75 percent
Elevation: 8,500 to 10,000 feet
Dominant present vegetation: White fir, limber pine, mountain big sagebrush, spike-fescue, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 25 inches
Average annual air temperature: About 41 degrees F
Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 5 percent

Depth: 0 to 1 inch
Texture: Channery loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 1 to 21 inches
Texture: Extremely channery clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Mildly alkaline
Salinity: Less than 2 mmhos per cm

Depth: 21 to 52 inches
Texture: Fractured, weathered shale

Depth: 52 inches
Texture: Unweathered shale

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None

Permeability: Slow

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 12 to 18 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2;
wind erodibility group—6

Hazard of erosion: By water—high; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Pachic Calcixerolls, loamy-skeletal,
carbonatic, frigid

Position on landscape: Side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush,
bluebunch wheatgrass

Inclusion 2

Classification: Lithic Haploxerolls, loamy-skeletal,
carbonatic, frigid

Position on landscape: Lower, south-facing side slopes of
mountains

Distinctive present vegetation: Singleleaf pinyon, Utah
juniper, mountain big sagebrush, bluebunch
wheatgrass

Inclusion 3

Classification: Typic Cryochrepts, loamy-skeletal,
mixed

Position on landscape: Concave, north-facing side slopes
of mountains

Distinctive present vegetation: Engelmann spruce,
mountain gooseberry, mountain brome, Columbia
needlegrass

Inclusion 4

Classification: Cryic Lithic Rendolls, loamy-skeletal,
carbonatic

Position on landscape: Crests of mountains

Distinctive present vegetation: Black sagebrush,
bluebunch wheatgrass

Interpretive Groups

Capability classification: Adobe and Haunchee soils—VIIIs,
Hardzem soil—VIIe, nonirrigated

Range site: Adobe soil—028BY027NV; Haunchee soil—
028BY043NV; Hardzem soil—028BY063NV; Inclusion
1—028BY070NV; Inclusion 2—028BY060NV;
Inclusion 3—028BY072NV; Inclusion 4—
028BY048NV

1570—Nyala-Broyles association

Map Unit Setting

Position on landscape: Fan piedmonts and fan skirts

Composition

Major components:

- Nyala sandy loam, 0 to 4 percent slopes—50 percent
- Broyles very fine sandy loam, 0 to 4 percent slopes—40 percent

Contrasting inclusions:

- Inclusion 1: Durixerollic Camborthids gravelly loam, 0 to 4 percent slopes—5 percent
- Inclusion 2: Xerollic Camborthids very gravelly loam, 0 to 4 percent slopes—5 percent

Characteristics of the Nyala Soil

Classification: Duric Haplargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 0 to 4 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 6 inches

Average annual air temperature: About 50 degrees F

Frost-free period: About 130 days

Typical Profile

Depth: 0 to 3 inches

Texture: Sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 12 inches

Texture: Sandy clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 12 to 56 inches

Texture: Sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 56 to 60 inches
Texture: Gravelly loamy sand
Structure: Massive
Consistence: Soft, very friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 6.5 to 8.3 inches
Water-supplying capacity: 6 to 10 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Characteristics of the Broyles Soil

Classification: Duric Camborthids, coarse-loamy, mixed, mesic
Position on landscape: Fan skirts
Parent material: Thin loess mantle over mixed loamy alluvium
Slope range: 0 to 4 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 7 inches
Average annual air temperature: About 48 degrees F
Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 40 percent
Depth: 0 to 12 inches
Texture: Very fine sandy loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm
Depth: 12 to 60 inches
Texture: Fine sandy loam
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline

Salinity: 4 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 6.0 to 7.5 inches
Water-supplying capacity: 5 to 7 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—3
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—moderate
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Camborthids, fine-loamy, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Xerollic Camborthids, fine-silty, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Interpretive Groups

Capability classification: Nyala soil—IIIe, Broyles soil—IIe, irrigated; Nyala soil—VIIc, Broyles soil—VIIc, nonirrigated
Range site: Nyala soil—028BY075NV; Broyles soil—028BY075NV; Inclusion 1—028BY010NV; Inclusion 2—028BY010NV

1580—Wredah-Selti-Tulase association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Wredah gravelly sandy loam, 4 to 8 percent slopes—40 percent
- Selti very stony coarse sandy loam, 4 to 15 percent slopes—25 percent

- Tulasie silt loam, 4 to 8 percent slopes—20 percent
- Contrasting inclusions:*
- Inclusion 1: Aridic Argixerolls gravelly loam, 8 to 30 percent slopes—8 percent
 - Inclusion 2: Pern silt loam, 2 to 8 percent slopes—4 percent
 - Inclusion 3: Aridic Argixerolls gravelly loam, 4 to 15 percent slopes—2 percent
 - Inclusion 4: Lithic Haploxerolls very gravelly loam, 4 to 8 percent slopes—1 percent

Characteristics of the Wredah Soil

Classification: Durargidic Argixerolls, fine-loamy, mixed, mesic

Position on landscape: Summits of the upper fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 8 percent

Elevation: 7,000 to 7,200 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 11 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 2 percent; pebbles, 30 percent

Depth: 0 to 5 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 5 to 17 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 17 to 34 inches

Texture: Very gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 34 to 60 inches

Texture: Extremely gravelly sandy loam

Structure: Massive

Consistence: Hard, firm and brittle

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 3.0 to 5.0 inches

Water-supplying capacity: 7 to 12 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.17; T value—5; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Selti Soil

Classification: Aridic Calcic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Upper side slopes of fan piedmont remnants

Parent material: Alluvium derived from monzonite

Slope range: 4 to 15 percent

Elevation: 7,000 to 7,200 feet

Dominant present vegetation: Big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 11 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 5 percent; pebbles, 25 percent

Depth: 0 to 4 inches

Texture: Very stony coarse sandy loam

Structure: Granular

Consistence: Soft, very friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Very cobbly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 30 to 60 inches

Texture: Extremely stony loamy coarse sand

Structure: Massive

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 3.0 to 4.5 inches

Water-supplying capacity: 8.5 to 11.5 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Tulase Soil

Classification: Durorthidic Xeric Torriorthents, coarse-silty, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Silty alluvium derived from mixed rocks and some volcanic ash

Slope range: 4 to 8 percent

Elevation: 7,000 to 7,200 feet

Dominant present vegetation: Wyoming big sagebrush, winterfat, basin wildrye, Indian ricegrass, thickspike wheatgrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 2 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 2 to 60 inches

Texture: Silt loam

Structure: Massive

Consistence: Hard, friable

Reaction: Strongly alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 9.0 to 12.0 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 2

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Inclusion 3

Classification: Aridic Argixerolls, loamy-skeletal, mixed, mesic

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, Thurber needlegrass

Inclusion 4

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper fan piedmont remnants adjacent to mountains

Distinctive present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Interpretive Groups

Capability classification: Tulase soil—IIIe, irrigated; Wredah and Tulase soils—VIc, Selti soil—VIIc, nonirrigated

Range site: Wredah soil—028BY007NV; Selti soil—

028BY007NV; Tulase soil—028BY045NV; Inclusion 1—028BY010NV; Inclusion 2—028BY003NV; Inclusion 3—028BY086NV; Inclusion 4—028BY062NV

1610—Sheffit-Blimo association

Map Unit Setting

Position on landscape: Basin floors

Composition

Major components:

- Sheffit silt loam, 0 to 2 percent slopes—65 percent
- Blimo gravelly loam, 0 to 2 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Aerice Halaquepts silty clay loam, 0 to 2 percent slopes—10 percent
- Inclusion 2: Kunzler silt loam, 0 to 2 percent slopes—3 percent
- Inclusion 3: Zorravista fine sand, 2 to 4 percent slopes—1 percent
- Inclusion 4: Calciorthidic Haploxerolls silt loam, 0 to 2 percent slopes—1 percent

Characteristics of the Sheffit Soil

Classification: Xeric Torriorthents, fine, montmorillonitic (calcareous), mesic

Position on landscape: Lake plains

Parent material: Mixed alluvium over lacustrine sediments

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,300 feet

Dominant present vegetation: Black greasewood, big sagebrush, basin wildrye

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 3 inches

Texture: Silt loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Very strongly alkaline

Salinity: 4 to 8 mmhos per cm

Depth: 3 to 60 inches

Texture: Stratified silt loam to clay

Structure: Massive

Consistence: Hard, friable

Reaction: Very strongly alkaline

Salinity: 8 to 16 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: 60 to 72 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 8.5 to 10.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Very slow

Hydrologic group: D

Erosion factors (surface layer): K value—.55; T value—5; wind erodibility group—4L

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: High

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Beach plains

Parent material: Mixed alluvium

Slope range: 0 to 2 percent

Elevation: 5,800 to 6,300 feet

Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.5 to 7.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Aeris Halaquepts, fine-silty, mixed (calcareous), mesic

Position on landscape: Lake plains

Distinctive present vegetation: Black greasewood, alkali sacaton, inland saltgrass

Inclusion 2

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic

Position on landscape: Lagoons on beach plains

Distinctive present vegetation: Wyoming big sagebrush, squirreltail, bluegrass

Inclusion 3

Classification: Xeric Torripsamments, mixed, mesic

Position on landscape: Dunes on lake plains

Distinctive present vegetation: Big sagebrush, Indian ricegrass, thickspike wheatgrass

Inclusion 4

Classification: Calciorthidic Haploxerolls, fine-silty, mixed, mesic

Position on landscape: Fluves on lake plains

Distinctive present vegetation: Basin big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Sheffit soil—VIIs, Blimo soil—VIs, nonirrigated

Range site: Sheffit soil—028BY028NV; Blimo soil—028BY014NV; Inclusion 1—028BY020NV; Inclusion 2—028BY056NV; Inclusion 3—028BY068NV; Inclusion 4—028BY003NV

1700—Garfan-Mclvey association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Garfan very gravelly loam, 2 to 8 percent slopes—45 percent
- Garfan very gravelly loam, 8 to 30 percent slopes—25 percent
- Mclvey very gravelly loam, 15 to 50 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Amelar gravelly silt loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Typic Argixerolls gravelly silt loam, 2 to 8 percent slopes—5 percent
- Inclusion 3: Devilsgrail silt loam, 2 to 8 percent slopes—5 percent

Characteristics of the Gently Sloping Garfan Soil

Classification: Xerollic Paleargids, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Summits of fan piedmont remnants

Parent material: Alluvium derived from quartzite

Slope range: 2 to 8 percent

Elevation: 7,000 to 8,000 feet

Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 10 percent; pebbles, 70 percent

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 27 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 to 60 inches

Texture: Extremely gravelly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Slow

Hydrologic group: D

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the More Sloping Garfan Soil

Classification: Xerollic Paleargids, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Side slopes of fan piedmont remnants

Parent material: Alluvium derived from quartzite

Slope range: 8 to 30 percent

Elevation: 7,000 to 8,000 feet

Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 10 percent; pebbles, 70 percent

Depth: 0 to 8 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 27 inches

Texture: Extremely cobbly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 27 to 60 inches

Texture: Extremely gravelly clay

Structure: Angular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 2.0 to 4.0 inches

Water-supplying capacity: 8 to 12 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—7

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the McIvey Soil

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Side slopes of fan piedmont remnants

Parent material: Alluvium derived from quartzite

Slope range: 15 to 50 percent

Elevation: 7,000 to 8,000 feet

Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 12 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 12 to 18 inches

Texture: Very gravelly clay loam

Structure: Angular blocky

Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Depth: 18 to 62 inches
Texture: Extremely cobbly clay
Structure: Angular blocky
Consistence: Very hard, very firm
Reaction: Neutral
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Very slow
Available water capacity: 5.0 to 7.5 inches
Water-supplying capacity: 10 to 18 inches
Runoff: Medium
Hydrologic group: C
Erosion factors (surface layer): K value—.05; T value—5; wind erodibility group—8
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Moderate
Corrosivity: Steel—moderate; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Calcic Argixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Upper side slopes of fan piedmont remnants
Distinctive present vegetation: Utah serviceberry, antelope bitterbrush, mountain big sagebrush, bluebunch wheatgrass, muttongrass

Inclusion 2

Classification: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Position on landscape: Inset fan remnants
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Cumulic Haplaquolls, fine-silty, mixed (calcareous), mesic
Position on landscape: Narrow axial-stream flood plains adjacent to fan piedmont remnants
Distinctive present vegetation: Mountain big sagebrush, basin wildrye

Interpretive Groups

Capability classification: Garfan soils and the McIvey soil—VIIs, nonirrigated
Range site: The gently sloping Garfan soil—028BY039NV; the more sloping Garfan soil—028BY039NV; McIvey

soil—028BY015NV; Inclusion 1—028BY091NV; Inclusion 2—028BY030NV; Inclusion 3—028BY024NV

1800—Pookaloo-Onkeyo-Cavehill association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Pookaloo very gravelly loam, 15 to 50 percent slopes—40 percent
 - Onkeyo very gravelly silt loam, 15 to 30 percent slopes—25 percent
 - Cavehill very gravelly silt loam, 15 to 50 percent slopes—20 percent
- Contrasting inclusions:*
- Inclusion 1: Tecomar extremely gravelly silt loam, 30 to 50 percent slopes—5 percent
 - Inclusion 2: Grink very stony loam, 30 to 50 percent slopes—5 percent
 - Inclusion 3: Xine gravelly loam, 15 to 50 percent slopes—4 percent
 - Inclusion 4: Rock outcrop—1 percent

Characteristics of the Pookaloo Soil

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: South-facing side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 7,000 to 7,800 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 13 inches
Average annual air temperature: About 46 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Cobbles, 5 percent; pebbles, 60 percent
Depth: 0 to 4 inches
Texture: Very gravelly loam
Structure: Platy
Consistence: Soft, very friable

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 4 to 19 inches
Texture: Very gravelly silt loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 19 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately slow
Available water capacity: 2.0 to 2.5 inches
Water-supplying capacity: 10 to 13 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.20; T value—1; wind erodibility group—6
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Onkeyo Soil

Classification: Lithic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Slightly concave, north-facing side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 30 percent
Elevation: 7,000 to 7,800 feet
Dominant present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 16 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 2 percent; cobbles, 5 percent; pebbles, 60 percent
Depth: 0 to 8 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky
Consistence: Soft, very friable

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 8 to 15 inches
Texture: Very cobbly silty clay loam
Structure: Subangular blocky
Consistence: Slightly hard, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 14 to 20 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 0.5 inch to 2.0 inches
Water-supplying capacity: 8 to 12 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Characteristics of the Cavehill Soil

Classification: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid
Position on landscape: North-facing side slopes of mountains
Parent material: Residuum and colluvium derived from limestone and dolomite
Slope range: 15 to 50 percent
Elevation: 7,000 to 7,800 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 14 inches
Average annual air temperature: About 44 degrees F
Frost-free period: About 75 days

Typical Profile

Surface cover: Stones and boulders, 1 percent; cobbles, 20 percent; pebbles, 60 percent
Depth: 0 to 15 inches
Texture: Very gravelly silt loam
Structure: Subangular blocky

Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 15 to 27 inches
Texture: Very gravelly loam
Structure: Subangular blocky
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 27 inches
Texture: Limestone

Soil and Water Features

Depth to bedrock: 20 to 40 inches
Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 2.0 to 4.0 inches
Water-supplying capacity: 9 to 11 inches
Runoff: Rapid
Hydrologic group: C
Erosion factors (surface layer): K value—.15; T value—2; wind erodibility group—8
Hazard of erosion: By water—moderate; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic
Position on landscape: Lower, convex side slopes of mountains
Distinctive present vegetation: Black sagebrush, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Haploxerolls, loamy-skeletal, mixed, frigid
Position on landscape: Upper, convex side slopes of mountains
Distinctive present vegetation: Curleaff mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Aridic Calcixerolls, loamy-skeletal, mixed, frigid
Position on landscape: Concave, north-facing side slopes of mountains
Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass

Inclusion 4

Position on landscape: Crests and side slopes of mountains
Distinctive present vegetation: None

Interpretive Groups

Capability classification: Pookaloo, Onkeyo, and Cavehill soils—VIIIs, nonirrigated
Range site: Pookaloo soil—028BY060NV; Onkeyo soil—028BY079NV; Cavehill soil—028BY062NV; Inclusion 1—028BY008NV; Inclusion 2—028BY043NV; Inclusion 3—028BY088NV; Inclusion 4—none

1810—Iltan-Yody-Blimo association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Iltan gravelly sandy loam, 4 to 30 percent slopes—40 percent
- Yody gravelly sandy loam, 2 to 8 percent slopes—30 percent
- Blimo gravelly loam, 2 to 4 percent slopes—15 percent

Contrasting inclusions:

- Inclusion 1: Xeric Torriorthents gravelly sandy loam, 4 to 30 percent slopes—7 percent
- Inclusion 2: Xerollic Durorthids gravelly loam, 4 to 15 percent slopes—4 percent
- Inclusion 3: Durixerollic Camborthids gravelly loam, 2 to 8 percent slopes—2 percent
- Inclusion 4: Xerollic Durargids, 2 to 8 percent slopes—2 percent

Characteristics of the Iltan Soil

Classification: Durixerollic Calciorthids, coarse-loamy, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium over tuffaceous sandstone
Slope range: 4 to 30 percent
Elevation: 6,400 to 6,800 feet
Dominant present vegetation: Singleleaf pinyon, Utah juniper, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 48 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 24 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 24 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, very firm

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 36 to 60 inches

Texture: Tuffaceous sandstone

Soil and Water Features

Depth to bedrock: 32 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 2.5 to 3.5 inches

Water-supplying capacity: 7 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Yody Soil

Classification: Haploxerollic Durargids, fine-loamy, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Alluvium derived from andesite

Slope range: 2 to 8 percent

Elevation: 6,400 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, Thurber needlegrass

Climatic Data

Average annual precipitation: About 9 inches

Average annual air temperature: About 47 degrees F

Frost-free period: About 110 days

Typical Profile

Depth: 0 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 4 to 30 inches

Texture: Gravelly sandy clay loam

Structure: Subangular blocky

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 30 to 36 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 36 to 60 inches

Texture: Strongly cemented duripan

Structure: Massive

Consistence: Very hard, very firm

Soil and Water Features

Depth to a hardpan: 30 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 5.0 to 6.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—2; wind erodibility group—4

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Blimo Soil

Classification: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Mixed alluvium

Slope range: 2 to 4 percent

Elevation: 6,400 to 6,800 feet

Dominant present vegetation: Wyoming big sagebrush, wheatgrass, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 49 degrees F

Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 8 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 8 to 21 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 21 to 60 inches

Texture: Gravelly sandy loam

Structure: Massive

Consistence: Very hard, firm

Reaction: Strongly alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Slow

Available water capacity: 4.5 to 7.5 inches

Water-supplying capacity: 8 to 10 inches

Runoff: Medium

Hydrologic group: C

Erosion factors (surface layer): K value—.20; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—high

Potential for frost action: Moderate

Contrasting Inclusions**Inclusion 1**

Classification: Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic, shallow

Position on landscape: Side slopes of fan piedmont remnants

Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass, needleandthread

Inclusion 2

Classification: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 3

Classification: Durixerollic Camborthids, coarse-loamy, mixed, mesic

Position on landscape: Inset fans

Distinctive present vegetation: Wyoming big sagebrush, needleandthread

Inclusion 4

Classification: Xerollic Durargids fine-loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Utah juniper, black sagebrush, Indian ricegrass, needleandthread

Interpretive Groups

Capability classification: Yody soil—IIle, irrigated; Ilton soil—VIIe, Yody and Blimo soils—VIs, nonirrigated

Range site: Ilton soil—028BY060NV; Yody soil—028BY086NV; Blimo soil—028BY014NV; Inclusion 1—028BY059NV; Inclusion 2—028BY010NV; Inclusion 3—028BY010NV; Inclusion 4—028BY059NV

1820—Sodhouse association**Map Unit Setting**

Position on landscape: Fan piedmonts

Composition

Major components:

- Sodhouse gravelly loam, 2 to 8 percent slopes—60 percent

- Sodhouse gravelly loam, eroded, 2 to 8 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Heist silt loam, 2 to 8 percent slopes—5 percent

- Inclusion 2: Typic Torriorthents gravelly sandy loam, 2 to 8 percent slopes—4 percent

- Inclusion 3: Palino gravelly loam, 2 to 8 percent slopes—4 percent

- Inclusion 4: Typic Haplargids very gravelly loam, 2 to 8 percent slopes—2 percent

Characteristics of the Sodhouse Soil

Classification: Typic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium and some volcanic ash

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 9 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 14 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 25 inches

Texture: Indurated duripan

Structure: Massive

Depth: 25 to 61 inches

Texture: Very gravelly loamy coarse sand

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 4 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—1; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Characteristics of the Eroded Sodhouse Soil

Classification: Typic Durorthids, loamy, mixed, mesic, shallow

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium and some volcanic ash

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Littleleaf mountainmahogany, black sagebrush, Scribner needlegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 6 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 6 to 14 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 25 inches

Texture: Indurated duripan

Structure: Massive

Depth: 25 to 60 inches

Texture: Very gravelly loamy coarse sand

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 1.5 to 2.5 inches

Water-supplying capacity: 4 to 6 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.28; T value—1;
wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Xeric Torriorthents, coarse-loamy, mixed
(calcareous), mesic

Position on landscape: Inset fans

Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 2

Classification: Typic Torriorthents, fine, montmorillonitic
(calcareous), mesic

Position on landscape: Rock pediment remnants adjacent
to fan piedmont remnants

Distinctive present vegetation: Shadscale, Indian
ricegrass

Inclusion 3

Classification: Xerollic Durorthids, loamy-skeletal,
carbonatic, mesic, shallow

Position on landscape: Fan piedmont remnants

Distinctive present vegetation: Black sagebrush, Indian
ricegrass, needleandthread

Inclusion 4

Classification: Typic Haplargids, fine, montmorillonitic,
mesic

Position on landscape: Rock pediment remnants adjacent
to fan piedmont remnants

Distinctive present vegetation: Fourwing saltbush, spiny
hopsage, Indian ricegrass

Interpretive Groups

Capability classification: Sodhouse soils—VIIIs,
nonirrigated

Range site: Sodhouse soil—028BY075NV; the eroded
Sodhouse soil—028BY066NV; Inclusion 1—
028BY084NV; Inclusion 2—028BY017NV; Inclusion
3—028BY011NV; Inclusion 4—028BY078NV

1821—Sodhouse-Palino association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Sodhouse gravelly loam, 2 to 8 percent slopes—55 percent

- Palino gravelly loam, 2 to 8 percent slopes—30 percent

Contrasting inclusions:

- Inclusion 1: Typic Durorthids very gravelly loam, 2 to 8 percent slopes—5 percent

- Inclusion 2: Heist silt loam, 2 to 8 percent slopes—5 percent

- Inclusion 3: Wintermute gravelly silt loam, 2 to 8 percent slopes—5 percent

Characteristics of the Sodhouse Soil

Classification: Typic Durorthids, loamy, mixed, mesic,
shallow

Position on landscape: Lower fan piedmont remnants

Parent material: Mixed alluvium and some volcanic ash

Slope range: 2 to 8 percent

Elevation: 6,000 to 6,200 feet

Dominant present vegetation: Shadscale, Indian ricegrass

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 48 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 9 inches

Texture: Gravelly loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 9 to 14 inches

Texture: Gravelly fine sandy loam

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 14 to 25 inches

Texture: Indurated duripan

Structure: Massive

Depth: 25 to 60 inches

Texture: Very gravelly loamy coarse sand

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: Less than 4 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches

Depth to a seasonal high water table: More than 60
inches

Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.5 to 2.5 inches
Water-supplying capacity: 4 to 6 inches
Runoff: Medium
Hydrologic group: D
Erosion factors (surface layer): K value—.28; T value—1;
 wind erodibility group—6
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Low

Characteristics of the Palinor Soil

Classification: Xerollic Durorthids, loamy-skeletal,
 carbonatic, mesic, shallow
Position on landscape: Upper fan piedmont
 remnants
Parent material: Alluvium derived from limestone and
 dolomite
Slope range: 2 to 8 percent
Elevation: 6,200 to 6,800 feet
Dominant present vegetation: Black sagebrush, Indian
 ricegrass, needleandthread

Climatic Data

Average annual precipitation: About 10 inches
Average annual air temperature: About 47 degrees F
Frost-free period: About 110 days

Typical Profile

Surface cover: Pebbles, 55 percent

Depth: 0 to 10 inches
Texture: Gravelly loam
Structure: Platy
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Depth: 10 to 18 inches
Texture: Extremely gravelly loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: 2 to 4 mmhos per cm

Depth: 18 to 30 inches
Texture: Indurated duripan

Depth: 30 to 60 inches
Texture: Extremely gravelly sandy loam
Structure: Massive
Consistence: Hard, firm

Reaction: Moderately alkaline
Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a hardpan: 14 to 20 inches
Depth to a seasonal high water table: More than 60
 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 1.0 to 2.0 inches
Water-supplying capacity: 6 to 8 inches
Runoff: Slow
Hydrologic group: D
Erosion factors (surface layer): K value—.24; T value—1;
 wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—low
Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Typic Durorthids, loamy, mixed, mesic,
 shallow
Position on landscape: Lower fan piedmont remnants
Distinctive present vegetation: Shadscale, Indian
 ricegrass

Inclusion 2

Classification: Xeric Torriorthents, coarse-loamy, mixed
 (calcareous), mesic
Position on landscape: Inset fans
Distinctive present vegetation: Winterfat, Indian ricegrass

Inclusion 3

Classification: Duric Calciorthids, loamy-skeletal, mixed,
 mesic
Position on landscape: Upper fan piedmont remnants
Distinctive present vegetation: Shadscale, Indian
 ricegrass

Interpretive Groups

Capability classification: Sodhouse and Palinor soils—
 VIIs, nonirrigated
Range site: Sodhouse soil—028BY017NV; Palinor soil—
 028BY011NV; Inclusion 1—028BY017NV; Inclusion
 2—028BY084NV; Inclusion 3—028BY075NV

1830—Armespan-Cliffdown-Candelaria association

Map Unit Setting

Position on landscape: Fan piedmonts

Composition

Major components:

- Armespan very gravelly sandy loam, 4 to 15 percent slopes—40 percent
- Cliffdown very gravelly sandy loam, 4 to 15 percent slopes—25 percent
- Candelaria very gravelly sandy loam, 4 to 15 percent slopes—25 percent

Contrasting inclusions:

- Inclusion 1: Durixerollic Haplargids gravelly loam, 4 to 15 percent slopes—5 percent
- Inclusion 2: Durixerollic Haplargids gravelly loam, 4 to 15 percent slopes—5 percent

Characteristics of the Armespan Soil

Classification: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic

Position on landscape: Fan piedmont remnants

Parent material: Mixed alluvium

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Black sagebrush, galleta, bud sagebrush, Indian ricegrass

Climatic Data

Average annual precipitation: About 10 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 115 days

Typical Profile

Surface cover: Pebbles, 25 percent

Depth: 0 to 1 inch

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 1 to 4 inches

Texture: Gravelly sandy loam

Structure: Platy

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Depth: 4 to 10 inches

Texture: Gravelly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Moderately alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 10 to 36 inches

Texture: Very gravelly sandy loam

Structure: Massive

Consistence: Hard, firm

Reaction: Moderately alkaline

Salinity: 8 to 16 mmhos per cm

Depth: 36 to 60 inches

Texture: Very gravelly loamy coarse sand

Structure: Massive

Consistence: Hard, friable

Reaction: Moderately alkaline

Salinity: 2 to 4 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 2.5 to 4.2 inches

Water-supplying capacity: 7 to 11 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—5

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Low

Corrosivity: Steel—high; concrete—low

Potential for frost action: Moderate

Characteristics of the Cliffdown Soil

Classification: Typic Torriorthents, loamy-skeletal, mixed (calcareous), mesic

Position on landscape: Inset fans

Parent material: Alluvium derived from limestone and dolomite

Slope range: 4 to 15 percent

Elevation: 6,000 to 6,500 feet

Dominant present vegetation: Winterfat, bud sagebrush, galleta, fourwing saltbush

Climatic Data

Average annual precipitation: About 8 inches

Average annual air temperature: About 53 degrees F

Frost-free period: About 130 days

Typical Profile

Surface cover: Pebbles, 30 percent

Depth: 0 to 3 inches

Texture: Very gravelly sandy loam

Structure: Platy

Consistence: Soft, very friable

Reaction: Moderately alkaline

Salinity: Less than 2 mmhos per cm

Depth: 3 to 60 inches
Texture: Very gravelly fine sandy loam
Structure: Massive
Consistence: Soft, very friable
Reaction: Moderately alkaline
Salinity: Less than 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderately rapid
Available water capacity: 3.0 to 4.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Slow
Hydrologic group: B
Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: Low

Characteristics of the Candelaria Soil

Classification: Typic Calciorthids, sandy-skeletal, mixed, mesic
Position on landscape: Fan piedmont remnants
Parent material: Mixed alluvium
Slope range: 4 to 15 percent
Elevation: 6,000 to 6,500 feet
Dominant present vegetation: Shadscale, galleta, Bailey greasewood, bud sagebrush

Climatic Data

Average annual precipitation: About 6 inches
Average annual air temperature: About 53 degrees F
Frost-free period: About 120 days

Typical Profile

Surface cover: Pebbles, 35 percent
Depth: 0 to 1 inch
Texture: Very gravelly sandy loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Strongly alkaline
Salinity: Less than 4 mmhos per cm
Depth: 1 to 3 inches
Texture: Gravelly fine sandy loam
Structure: Platy
Consistence: Slightly hard, friable
Reaction: Strongly alkaline

Salinity: Less than 4 mmhos per cm

Depth: 3 to 22 inches
Texture: Very gravelly sandy loam
Structure: Prismatic parting to subangular blocky
Consistence: Hard, firm
Reaction: Strongly alkaline
Salinity: More than 8 mmhos per cm

Depth: 22 to 60 inches
Texture: Extremely gravelly loamy coarse sand
Structure: Massive
Consistence: Hard, friable
Reaction: Strongly alkaline
Salinity: 4 to 8 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches
Frequency of flooding: None
Permeability: Moderate
Available water capacity: 3.0 to 4.0 inches
Water-supplying capacity: 5 to 8 inches
Runoff: Medium
Hydrologic group: B
Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—5
Hazard of erosion: By water—slight; by wind—slight
Shrink-swell potential: Low
Corrosivity: Steel—high; concrete—high
Potential for frost action: Low

Contrasting Inclusions

Inclusion 1

Classification: Durixerollic Haplargids, fine-loamy, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, galleta, Indian ricegrass

Inclusion 2

Classification: Durixerollic Haplargids, coarse-loamy, mixed, mesic
Position on landscape: Inset fans
Distinctive present vegetation: Wyoming big sagebrush, Indian ricegrass, desert needlegrass, galleta

Interpretive Groups

Capability classification: Armespan, Cliffdown, and Candelaria soils—Vlls, nonirrigated
Range site: Armespan soil—029XY008NV; Cliffdown soil—029XY020NV; Candelaria soil—029XY017NV;
Inclusion 1—029XY006NV; Inclusion 2—029XY049NV

1850—Clanalpine-Rubble land-Rock outcrop association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Clanalpine very cobbly sandy loam, 30 to 50 percent slopes—65 percent
- Rubble land, 15 to 50 percent slopes—15 percent
- Rock outcrop—10 percent

Contrasting inclusions:

- Inclusion 1: Lithic Argixerolls very gravelly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Segura very cobbly loam, 15 to 50 percent slopes—5 percent

Characteristics of the Clanalpine Soil

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Side slopes of mountains

Parent material: Residuum and colluvium derived from monzonite

Slope range: 30 to 50 percent

Elevation: 7,000 to 8,500 feet

Dominant present vegetation: Singleleaf pinyon, curlleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Climatic Data

Average annual precipitation: About 15 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 80 days

Typical Profile

Surface cover: Stones and boulders, 15 percent; cobbles, 5 percent; pebbles, 45 percent

Depth: 0 to 10 inches

Texture: Very cobbly sandy loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 10 to 30 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Hard, friable

Reaction: Mildly alkaline

Salinity: Less than 2 mmhos per cm

Depth: 30 inches

Texture: Monzonite

Soil and Water Features

Depth to bedrock: 20 to 40 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 4.5 to 5.0 inches

Water-supplying capacity: 10 to 14 inches

Runoff: Rapid

Hydrologic group: C

Erosion factors (surface layer): K value—.17; T value—2; wind erodibility group—8

Hazard of erosion: By water—moderate; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Rubble Land

Surface cover: Boulders, stones, and cobbles, more than 90 percent

Characteristics of the Rock Outcrop

Position on landscape: Crests and side slopes of mountains

Kind of rock: Monzonite

Contrasting Inclusions

Inclusion 1

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: Singleleaf pinyon, mountain big sagebrush, Utah juniper, bluebunch wheatgrass

Inclusion 2

Classification: Lithic Argixerolls, loamy, mixed, frigid

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: Mountain big sagebrush, bluebunch wheatgrass, Thurber needlegrass

Interpretive Groups

Capability classification: Clanalpine soil—VIIIs, nonirrigated; Rubble land and Rock outcrop—VIIIs

Range site: Clanalpine soil—028BY058NV; Rubble land—none; Rock outcrop—none; Inclusion 1—028BY058NV; Inclusion 2—028BY087NV

1860—Hackwood-Chen-Tusel association

Map Unit Setting

Position on landscape: Mountains

Composition

Major components:

- Hackwood gravelly silt loam, 8 to 30 percent slopes—35 percent
- Chen very gravelly loam, 8 to 30 percent slopes—30 percent
- Tusel cobbly loam, 8 to 30 percent slopes—20 percent

Contrasting inclusions:

- Inclusion 1: Guiser extremely cobbly loam, 15 to 50 percent slopes—5 percent
- Inclusion 2: Suak very stony loam, 15 to 50 percent slopes—5 percent
- Inclusion 3: Cumulic Haplaquolls silt loam, 2 to 8 percent slopes—3 percent
- Inclusion 4: Rock outcrop—2 percent

Characteristics of the Hackwood Soil

Classification: Pachic Cryoborolls, fine-loamy, mixed

Position on landscape: Concave side slopes of mountains

Parent material: Colluvium derived from quartzite and conglomerate

Slope range: 8 to 30 percent

Elevation: 8,000 to 9,000 feet

Dominant present vegetation: Quaking aspen, mountain brome, slender wheatgrass

Climatic Data

Average annual precipitation: About 18 inches

Average annual air temperature: About 41 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 20 percent

Depth: 0 to 22 inches

Texture: Gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 22 to 31 inches

Texture: Gravelly silt loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 31 to 60 inches

Texture: Very gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Soil and Water Features

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderate

Available water capacity: 6.0 to 9.0 inches

Water-supplying capacity: 16 to 20 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.10; T value—5; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Chen Soil

Classification: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid

Position on landscape: Convex crests and side slopes of mountains

Parent material: Residuum derived from andesite and conglomerate and some loess

Slope range: 8 to 30 percent

Elevation: 8,000 to 9,000 feet

Dominant present vegetation: Low sagebrush, bluebunch wheatgrass, Thurber needlegrass

Climatic Data

Average annual precipitation: About 12 inches

Average annual air temperature: About 44 degrees F

Frost-free period: About 85 days

Typical Profile

Surface cover: Stones and boulders, 5 percent; cobbles, 15 percent; pebbles, 70 percent

Depth: 0 to 7 inches

Texture: Very gravelly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 7 to 17 inches

Texture: Extremely gravelly clay

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 17 inches

Texture: Andesite

Soil and Water Features

Depth to bedrock: 12 to 20 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Very slow

Available water capacity: 1.0 to 2.0 inches

Water-supplying capacity: 7 to 9 inches

Runoff: Medium

Hydrologic group: D

Erosion factors (surface layer): K value—.10; T value—1; wind erodibility group—8

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Characteristics of the Tusel Soil

Classification: Argic Pachic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Concave side slopes of mountains

Parent material: Residuum and colluvium derived from quartzite and conglomerate

Slope range: 8 to 30 percent

Elevation: 8,000 to 9,000 feet

Dominant present vegetation: Mountain big sagebrush, mountain brome, Letterman needlegrass

Climatic Data

Average annual precipitation: About 17 inches

Average annual air temperature: About 43 degrees F

Frost-free period: About 60 days

Typical Profile

Surface cover: Pebbles, 50 percent

Depth: 0 to 13 inches

Texture: Cobbly loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 13 to 42 inches

Texture: Extremely gravelly clay loam

Structure: Subangular blocky

Consistence: Slightly hard, very friable

Reaction: Neutral

Salinity: Less than 2 mmhos per cm

Depth: 42 inches

Texture: Quartzite

Soil and Water Features

Depth to bedrock: 40 to 60 inches

Depth to a seasonal high water table: More than 60 inches

Frequency of flooding: None

Permeability: Moderately slow

Available water capacity: 4.0 to 5.0 inches

Water-supplying capacity: 12 to 20 inches

Runoff: Medium

Hydrologic group: B

Erosion factors (surface layer): K value—.20; T value—3; wind erodibility group—6

Hazard of erosion: By water—slight; by wind—slight

Shrink-swell potential: Moderate

Corrosivity: Steel—moderate; concrete—low

Potential for frost action: Moderate

Contrasting Inclusions

Inclusion 1

Classification: Mollic Cryoborolls, loamy-skeletal, mixed

Position on landscape: Upper side slopes of mountains

Distinctive present vegetation: White fir, quaking aspen, spike-fescue, mountain brome, slender wheatgrass

Inclusion 2

Classification: Typic Argixerolls, loamy-skeletal, mixed, frigid

Position on landscape: Upper, convex side slopes of mountains

Distinctive present vegetation: Curleaf mountainmahogany, mountain big sagebrush, bluebunch wheatgrass

Inclusion 3

Classification: Cumulic Haplaquolls, fine-loamy, mixed, mesic

Position on landscape: Drainageways and areas adjacent to springs and seeps on mountains

Distinctive present vegetation: Nevada bluegrass, alpine timothy

Inclusion 4

Position on landscape: Crests and side slopes of mountains

Distinctive present vegetation: None

Interpretive Groups

Capability classification: Hackwood, Chen, and Tusel soils—VIIIs, nonirrigated

Range site: Hackwood soil—028BY067NV; Chen soil—028BY037NV; Tusel soil—028BY029NV; Inclusion 1—028BY055NV; Inclusion 2—028BY032NV; Inclusion 3—028BY095NV; Inclusion 4—none

Prime Farmland

In this section, prime farmland is defined and the soils in the survey area that are considered prime farmland are listed.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, State, and Federal levels, as well as individuals, must encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are those soils best suited to food, seed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. The soils need only to be treated and managed by acceptable farming methods. An adequate moisture supply and a sufficiently long growing season are required. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources, and farming these soils results in the least damage to the environment.

Prime farmland soils either are used for food or fiber or are available for these uses. Urban or built-up land and water areas cannot be considered prime farmland.

Prime farmland soils commonly receive an adequate and dependable supply of moisture from precipitation or irrigation. Temperature and growing season are favorable, and the level of acidity or alkalinity is acceptable. The soils have few, if any, rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods and are not frequently flooded during the growing season. The slope ranges mainly from 0 to 6 percent.

Soils that have a high water table, are subject to flooding, or are droughty may qualify as prime farmland where these limitations are overcome by drainage systems, flood control, or irrigation. Onsite evaluation is necessary to determine the effectiveness of corrective measures. More information about the criteria for prime farmland can be obtained at the local office of the Natural Resources Conservation Service.

A recent trend in land use has been the conversion of prime farmland to urban and industrial uses. The loss of prime farmland to other uses puts pressure on lands that are less productive than prime farmland.

Following are two lists of map units. On the first list, all of the major component soils of the map units are rated prime farmland when irrigated. On the second list, at least one major component of the map units is rated prime farmland when irrigated. On some soils included on the lists, measures that overcome a hazard or limitation, such as flooding, wetness, droughtiness, and salinity, are needed. The location of each map unit is shown on the detailed soil maps at the back of this publication. The soil qualities that affect use and management are described in the section "Detailed Soil Map Units." The lists do not constitute a recommendation for a particular land use.

When irrigated, all of the major components in the following map units are considered prime farmland:

- 173 Tulase-Yody-Heist association
- 179 Tulase-Pern association
- 351 Heist-Tulase association
- 353 Heist silt loam, 0 to 4 percent slopes
- 578 Yody gravelly sandy loam, 2 to 4 percent slopes
- 940 Nyak-Heist association

In the following map units, one or more components meet the soil requirements for prime farmland when irrigated. The name of the component and the percentage of the map unit consisting of the component are given after the map unit name.

- 160 Zerk-Heist-Tosser association—Heist silt loam, 2 to 4 percent slopes (15 percent)
- 162 Broyles-Kunzler-Heist association—Heist silt loam, 2 to 4 percent slopes (15 percent)
- 185 Pyrat-Heist-Tulase association—Heist silt loam, 0 to 4 percent slopes (30 percent), and Tulase silt loam, 0 to 4 percent slopes (25 percent)
- 190 Cowgil-Yody-Fax association—Yody gravelly sandy loam, 2 to 8 percent slopes (30 percent)
- 192 Cowgil-Yody association—Yody gravelly sandy loam, 0 to 2 percent slopes (25 percent)
- 232 Linoyer-Heist-Tulase association—Heist silt loam, 0 to 4 percent slopes (35 percent), and Tulase silt loam, 0 to 4 percent slopes (15 percent)
- 243 Katelana-Heist-Nyak association—Heist silt loam, 0 to 2 percent slopes (30 percent)

- 279 Atlow-Broland-Yody association—Yody gravelly sandy loam, 4 to 15 percent slopes (20 percent)
- 288 Palinor-Yody-Broland association—Yody gravelly sandy loam, 2 to 8 percent slopes (25 percent)
- 290 Palinor-Shabliss-Tulase association—Tulase silt loam, 2 to 4 percent slopes (20 percent)
- 338 Parisa-Palinor-Tulase association—Tulase silt loam, 0 to 2 percent slopes (15 percent)
- 356 Heist-Wintermute association—Heist silt loam, 0 to 2 percent slopes (50 percent)
- 437 Pookaloo-Urmafot-Tulase association—Tulase silt loam, 2 to 4 percent slopes (15 percent)
- 450 Shabliss-Yody association—Yody gravelly sandy loam, 2 to 8 percent slopes (35 percent)
- 455 Shabliss-Tulase-Linoyer association—Tulase silt loam, 2 to 4 percent slopes (30 percent)
- 471 Hessing-Tulase association—Tulase silt loam, 0 to 4 percent slopes (25 percent)
- 570 Yody-Blimo-McConnel association—Yody gravelly sandy loam, 2 to 8 percent slopes (40 percent)
- 573 Yody-Palinor-Shabliss association—Yody gravelly sandy loam, 2 to 8 percent slopes (45 percent)
- 575 Yody-Broyles association—Yody gravelly sandy loam, 2 to 4 percent slopes (50 percent)
- 580 Uwell-Kelk association—Kelk very fine sandy loam, 0 to 4 percent slopes (25 percent)
- 605 Blimo-Heist-Tosser association—Heist silt loam, 0 to 4 percent slopes (20 percent)
- 610 Broyles-Heist-Unsel association—Heist silt loam, 2 to 4 percent slopes (25 percent)
- 680 Genaw-Puett-Abgese association—Abgese sandy loam, 2 to 4 percent slopes (20 percent)
- 780 Bobs-Orr-Urmafot association—Orr gravelly sandy loam, 4 to 15 percent slopes (20 percent)
- 790 Bylo-Tulase association—Tulase silt loam, 0 to 2 percent (20 percent)
- 802 Broland-Yody association—Yody gravelly sandy loam, 2 to 8 percent slopes (40 percent)
- 810 Yody-Fax association—Yody gravelly sandy loam, 4 to 15 percent slopes (50 percent)
- 830 Genaw-Tulase association—Tulase silt loam, 0 to 4 percent slopes (35 percent)
- 842 Orr-Fax association—Orr gravelly sandy loam, 2 to 8 percent slopes (50 percent)
- 870 Amelar-Eoj association—Amelar very gravelly silt loam, 4 to 15 percent slopes (35 percent)
- 880 Wredah-Amelar-Orr association—Orr gravelly sandy loam, 2 to 8 percent slopes (20 percent)
- 900 Abgese-Roden-Orr association—Abgese sandy loam, 4 to 15 percent slopes (40 percent)
- 902 Abgese-Risley-Roden association—Abgese sandy loam, 2 to 8 percent slopes (40 percent), and Risley clay loam, 2 to 8 percent slopes (30 percent)
- 920 Abgese-Yody-Shabliss association—Abgese sandy loam, 2 to 4 percent slopes (45 percent), and Yody gravelly sandy loam, 2 to 4 percent slopes (20 percent)
- 951 Nyak-Uwell-Pern association—Pern silt loam, 0 to 2 percent slopes (15 percent)
- 960 Doten-Bylo-Heist association—Heist silt loam, 0 to 2 percent slopes (15 percent)
- 982 Breko-Yody association—Yody gravelly sandy loam, 2 to 4 percent slopes (40 percent)
- 990 Blimo-Kunzler-Pern association—Pern silt loam, 0 to 2 percent slopes (15 percent)
- 992 Blimo-Linoyer-Tulase association—Tulase silt loam, 2 to 4 percent slopes (15 percent)
- 1012 Hunnton-Wieland-Kelk association—Hunnton silt loam, 2 to 8 percent slopes (40 percent)
- 1020 Sonoma-Kelk association—Kelk very fine sandy loam, 0 to 2 percent slopes (40 percent)
- 1032 Chiara-Kelk association—Kelk very fine sandy loam, 2 to 8 percent slopes (20 percent)
- 1050 Yody-Dewar association, cool—Yody gravelly sandy loam, 2 to 8 percent slopes (50 percent)
- 1122 Kunzler-Pern association—Pern silt loam, 0 to 2 percent slopes (30 percent)
- 1201 Biken-Orr association—Orr gravelly sandy loam, 2 to 8 percent slopes (40 percent)
- 1245 Biken-Tulase association—Tulase silt loam, 2 to 4 percent slopes (15 percent)
- 1251 Alley-Yody-Cowgil association—Yody gravelly sandy loam, 2 to 8 percent slopes (25 percent)
- 1330 Yody-Dewar association—Yody gravelly sandy loam, 2 to 8 percent slopes (55 percent)
- 1340 Pyrat-Tulase association—Tulase silt loam, 0 to 4 percent slopes (35 percent)
- 1491 Pyrat-Palinor-Tulase association—Tulase silt loam, 0 to 4 percent slopes (20 percent)
- 1493 Pyrat-Parisa-Tulase association—Tulase silt loam, 0 to 4 percent slopes (20 percent)
- 1510 Raph-Zimwala-Heist association—Heist silt loam, 0 to 2 percent slopes (20 percent)
- 1520 Fax-Yody-Broland association—Yody gravelly sandy loam, 2 to 8 percent (25 percent)
- 1810 Ilton-Yody-Blimo association—Yody gravelly sandy loam, 2 to 8 percent slopes (30 percent)

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and woodland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreation facilities; and for wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. Also, the system of land capability classification used by the Natural Resources Conservation Service is explained.

Planners of management systems for individual fields or farms should consider the detailed information given in

the description of each soil under the heading "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

The goal of good land management is the production of the greatest amount of the desired crops in a manner that protects and improves the soil and other resources. This goal can be achieved only if the land is protected according to its needs and used within its capabilities. Good management includes the selection of plants that grow well on the soil, management practices that protect the soil, and measures that maintain soil tilth.

Resource management systems are a combination of interrelated conservation practices and management techniques. They are used to prevent deterioration of the soil and to maintain its productive capability. They help to keep soil erosion and other factors that may affect production within acceptable limits. The systems should maintain or improve water quantity and quality, air quality, and important plant and animal resources.

Different management is needed on diverse kinds of soil. Basic essential practices, however, apply to all cultivated soils. Aspects of management are described in the following paragraphs.

A desirable cropping system consists of a crop rotation and cultural and management practices that improve the soil and more than offset the depletion and deterioration of the soil. The system should protect the soil from erosion and should maintain or improve fertility and tilth. It should include perennial legumes, grass-legume mixtures, or other crops that produce large quantities of residue, which can compensate for crops in the rotation that produce little or no residue. Leaving the residue on the surface or incorporating it into the soil provides organic matter and nutrients and protects the soil from erosion.

Adequate kinds and amounts of fertilizer are needed to maintain or to improve fertility. Tillage operations should be limited to those that are essential for seedbed preparation and weed control. Tilling at the proper moisture condition helps to prevent surface compaction and maintains soil tilth.

A typical cropping system in this survey area is 8 or more years of alfalfa and 1 or 2 years of small grain. The residue from small grain is baled as straw or returned to the soil. Alfalfa could be seeded into the grain stubble.

Garlic for seed or for the fresh market is grown in isolated areas within the survey area.

Proper irrigation water management is the application of irrigation water at rates and in amounts adequate to produce high crop yields and to minimize soil and water losses. The water should be applied according to the needs of the crop and the characteristics of the soil. A good irrigation distribution system is one that has enough capacity to meet the needs of the crops grown during periods of peak consumptive use.

Management of saline or sodic soils may include reclamation measures. Four classes of salinity are recognized in the survey area:

1. Nonsaline soils are relatively free of excess salts and contain less than 0.15 percent soluble salts. The electrical conductivity of the saturation extract is less than 4 millimhos per centimeter at 25 degrees C.
2. Slightly saline soils are those that contain 0.15 to 0.35 percent soluble salts or in which the electrical conductivity of the saturation extract is 4 to 8 millimhos per centimeter at 25 degrees C.
3. Moderately saline soils are those that contain 0.35 to 0.65 percent soluble salts or in which the electrical conductivity of the saturation extract is 8 to 16 millimhos per centimeter at 25 degrees C.
4. Strongly saline soils are those that contain more than 0.65 percent soluble salts or in which the electrical conductivity of the saturation extract is more than 16 millimhos per centimeter at 25 degrees C.

Four classes of sodicity are recognized in the survey area:

1. Nonsodic soils are relatively free of sodium or have a sodium adsorption ratio of less than 13.
2. Slightly sodic soils have a sodium adsorption ratio of 13 to 23.
3. Moderately sodic soils have a sodium adsorption ratio of 23 to 68.
4. Strongly sodic soils have a sodium adsorption ratio of more than 68.

An adequate supply of good-quality water and adequate drainage are needed in reclaiming any saline or sodic soil. Sprinkler systems are the most common means of applying irrigation water in the survey area. These systems include hand lines, wheel lines, and center pivots. If drainage is adequate and an adequate amount of water is applied by any of these systems, the soluble salts can be leached out the root zone. Leaching becomes more difficult if the soil contains an excessive amount of exchangeable sodium and as the permeability rate decreases. In addition to drainage and leaching, other practices are needed to improve sodic soils.

Seeding salt- and sodium-tolerant grasses is an alternative to reclamation through the use of large

quantities of gypsum. Tall wheatgrass, western wheatgrass, and alta fescue are among the grasses that can grow in soils having relatively strong concentrations of soluble salts and sodium.

Proper pasture management is grazing pasture at a rate that maintains high-quality grasses and legumes. Properly adjusting stocking rates or the season of use can maximize the growth and survival of plants and reduce the adverse impact of livestock on the soil. Proper pasture management maintains or improves soil fertility, minimizes compaction, maintains or increases water infiltration and storage, and protects water and air quality.

A common method of pasture management is to rotate grazing among several pastures. This method allows adequate regrowth in each pasture. Livestock should be excluded when the pastures are wet. Allowing the livestock to graze when the pastures are wet results in compaction of the soil, a decrease in the rate of water intake, and deterioration of soil structure. Proper irrigation water management and a proper drainage system are needed. Applying commercial fertilizer and barnyard manure can increase yields. Mowing generally can control weeds. Droppings of manure can be spread with a drag each spring.

Applications of plant nutrients can improve productivity. Most of the crops grown in the survey respond well to applications of solid or liquid fertilizer. The kinds and amounts of fertilizer to be applied should be based on the needs of the crop to be grown and on analysis of soil samples or plant tissue. Applications of phosphorus and nitrogen increase the production of small grain and help to establish alfalfa. Unless seeded in combination with grasses, established alfalfa generally requires only applications of phosphorus throughout the duration of the stand.

Erosion control protects the surface layer from water erosion, wind erosion, or both. This protection is needed because the surface layer contains most of the organic matter that is in the soil and is generally more fertile than the rest of the soil. Wind erosion can be controlled by keeping a plant cover on the surface or by applying a system of minimum tillage designed to maximize the amount of plant residue on the surface and the roughness of the surface. Applying irrigation water at the proper rate helps to control water erosion.

Proper hayland management ensures the prolonged life of desirable forage plants, maintains or improves the quality of forage, helps to control erosion, and limits water losses.

Alfalfa hay is grown on most of the hayland in the survey area. High-quality, certified, inoculated seeds of locally adapted species produce the highest yields during the growing season. The frequency of irrigation and the

amount of irrigation water needed depend on the available water capacity of the soil and the rate of evapotranspiration.

Land leveling, grading, shaping, and subsoiling should be completed before final seedbed preparation. An annual crop should be grown for at least 1 year before alfalfa is established. Yields generally are increased by applications of fertilizer. For the highest quality forage, alfalfa should be harvested at about one-tenth bloom, or when new crown buds are 1.0 to 1.5 inches long.

Aftermath grazing of alfalfa is suitable in fall or winter. A stubble height of 3 to 4 inches is needed to control erosion. Plants should not be grazed late in winter or early in spring, after new growth has started. Grazing during this period depletes nutrient reserves in the roots and can damage the stand and reduce forage production.

Surface drainage is required on the soils in the survey area that are flooded either naturally or by seasonal irrigation. Most areas of these soils are irrigated by sprinklers. They are commonly adjacent to intermittent stream channels that are subject to wild flooding. Measures that protect both fields and equipment from flood damage are needed in these areas.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.

In the capability system, soils generally are grouped at three levels: capability class, subclass, and unit. Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use.

Class VI soils have severe limitations that make them generally unsuitable for cultivation.

Class VII soils have very severe limitations that make them unsuitable for cultivation.

Class VIII soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, IIe. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class I there are no subclasses because the soils of this class have few limitations. Class V contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class V are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, woodland, wildlife habitat, or recreation.

Range, Woodland, and Wildlife Habitat

Roy Kaiser, range conservationist, Natural Resources Conservation Service, helped prepare this section.

This survey area consists of about 70 percent rangeland and 30 percent woodland.

Rangeland plant communities are on four general landforms—flood plains, including axial-stream flood plains; basin floors; fan piedmont remnants; and hills and mountains. The plant communities are dominated by alkali sacaton, alkali cordgrass, basin wildrye, Nevada bluegrass, western wheatgrass, black greasewood, basin big sagebrush, and Torrey quailbush on the flood plains; bottlebrush squirreltail, basin wildrye, rhizomatous wheatgrass, Indian ricegrass, bluegrass, shadscale, black greasewood, basin or Wyoming big sagebrush, and winterfat on the basin floors; Indian ricegrass, bottlebrush squirreltail, needleandthread, rhizomatous wheatgrass, bluebunch wheatgrass, galleta, Thurber needlegrass, basin wildrye, black greasewood, basin or Wyoming big sagebrush, black sagebrush, shadscale, and winterfat on the fan piedmont remnants; and Indian ricegrass, Thurber needlegrass, bluebunch wheatgrass, Columbia needlegrass, spike-fescue, bluegrass, galleta, black

sagebrush, mountain big sagebrush, curleaf mountainmahogany, and littleleaf mountainmahogany on the hills and mountains.

Woodland plant communities are on the hills and mountains. They are dominated by curleaf mountainmahogany, singleleaf pinyon, Utah juniper, white fir, limber pine, bristlecone pine, quaking aspen, Indian ricegrass, bluebunch wheatgrass, Thurber needlegrass, mountain brome, mountain big sagebrush, and black sagebrush.

The native plant communities have been changed by several land-disturbing activities, including heavy grazing, fires, mining, the installation of power and telephone lines, and gas, oil, and geothermal explorations. In some areas desirable vegetation has decreased in abundance and undesirable vegetation has increased. In places cheatgrass, mustards, Utah juniper, singleleaf pinyon, and other invaders dominate the plant communities.

Currently, the Bureau of Land Management (BLM) administers most of the rangeland and woodland in the survey area. Prior to regulated use of Federal lands, vast numbers of livestock roamed the range on a first-come, first-serve basis with little or no grazing management. As a result, forage, soil, and water resources deteriorated. Federal range use regulations were designed to limit the number of livestock to the carrying capacities of Federal lands and to the forage-producing capacity of private lands. In many areas the range condition has greatly improved, but the amount of available forage is still less than the potential production.

Ranching and mining are the dominant commercial uses of the land in the survey area. The ranches and ranchettes in the area range from less than 40 acres to several thousand acres in size. Most of the ranches are cow-calf or cow-calf-sheep operations. Livestock grazing is the principal use of the range and woodland. Mining has been important in the survey area and is active today.

Livestock operations in the survey area depend largely upon Federal grazing permits. Base herds are wintered near each operator's headquarters and fed native or alfalfa hay produced on the ranch, or they are turned out onto winter allotments. Around the later part of March and the early part of April, ranchers turn their herds out from private wintering grounds onto spring and summer allotments of BLM, the U.S. Forest Service, or both. The herds begin grazing on the spring allotments and gradually work their way up to the summer allotments until September or October, when they are shipped to feedlots or slaughterhouses or moved onto their winter feeding grounds. The base herds feed on hayland aftermath from early October to the early or middle part of November, when they are fed hay or are turned out onto winter ranges. The herds are fed hay until the rangeland is ready for grazing in mid-March or early April. The valley bottoms

in the southeastern part of the survey area are used both as spring and winter allotments.

During the fall roundup, replacement heifers, bulls, and holdover calves are selected from the herd. These animals will become the base herd. Cull animals generally consist of those whose productivity is impaired because of injuries, old age, or diminished reproductive capacity. They are sold and shipped to market.

The most common resource management applied on the rangeland includes proper grazing use, brush control, deferred grazing or planned grazing systems, fencing, livestock water developments, and rangeland seeding. The most common resource management applied on the woodland includes erosion-control practices that dispose of runoff in a safe manner, woodland harvesting, and proper grazing use.

Proper use of rangeland plants is essential for maintaining a healthy, well balanced plant community. Proper plant use maintains enough cover to protect the soil and to maintain or improve the quantity and quality of desirable vegetation. Proper range management depends on many factors, including the season of grazing use, the kind of grazing animal, the intensity and distribution of grazing, and the capability, condition, and trend of the range resource. A knowledge of relationships among soils, vegetation, and the moisture available for plant growth is needed for effective management.

For most plant communities, good management can improve the present condition and productivity of the rangeland and prevent accelerated erosion. The optimum multiple use of rangeland requires extensive knowledge of the capacities and limitations of the rangeland. A basic understanding of the dynamics of native plant communities and the characteristics and properties of soils is fundamental in applying ecological principles in the evaluation and management of rangeland resources.

During the course of this soil survey, range and woodland sites were correlated to the soils mapped within the survey area. These correlations were based on the current understanding of the soil-plant-climate relationships in the survey area. The soil properties that affect the moisture supply and plant nutrients have the greatest influence on the productivity of range plants. Soil reaction, salt or lime content, and topographic position also are important. Climatic relationships to vegetation and soils are accounted for in soil classification and soil mapping criteria. In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Range and woodland sites generally can be determined from soil maps and map unit legends developed for the soil survey area.

A range site is a distinctive kind of rangeland that differs from other kinds of rangeland in its ability to

produce a characteristic natural plant community. A range site is the product of all environmental factors responsible for its development. It can support a native plant community typified by an association of species that differs from the potential plant community of other range sites in kind or proportion of species or in total production. Drought, fire, grazing by native fauna, insect and disease damage, and other disturbances are recognized as natural factors in the development of native plant communities. A detailed description of each range site in the survey area is included in the Technical Guide, which is available in the local office of the Natural Resources Conservation Service.

The tables in the section "Rangeland Plants and Woodland Understory" show the rangeland plants and woodland understory for each major soil and contrasting inclusion in the detailed soil map units in the survey area, the common plant name and scientific plant symbol for the characteristic vegetation, the average percent composition for each species in the potential plant community, the range site number, and the potential annual production of vegetation in favorable, normal, and unfavorable years. The characteristic vegetation, which consists of the grasses, forbs, and shrubs that make up most of the potential plant community, is listed by common name. The expected percentage of the potential annual production is given for each species making up the characteristic vegetation. The amount that can be used as forage depends on the kinds of grazing animals, the grazing season, and the availability of forage. Many plants, trees, and shrubs are inaccessible or not within reach of foraging animals.

Potential production is the amount of vegetation that can be expected to grow annually on well managed rangeland that supports the potential natural community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation during periods of warm temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture.

Range management in a given area requires a knowledge of the kinds of soil in the area and of the potential natural plant communities that the soils can support. It also requires an evaluation of the present range condition. Range condition is determined by comparing the present plant community with the natural potential plant community on a particular range site. The

more closely the existing community resembles the potential plant community, the better the range condition. Range condition is an ecological rating only. It does not have a specific meaning that pertains to the present plant community for a given use.

The range condition rating alone does not indicate whether the present plant community is improving or deteriorating in relation to its potential. The trend in range condition is a measure of the direction of change in the condition. The present range condition reflects the accumulated effects of past use. The trend in range condition is an expression of the effects of current use. Once potential plant communities have been identified and the present range condition has been determined, monitoring of the trend in range condition over time can help to indicate whether management objectives are being met.

Generally, the objective of range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the natural potential plant community for the site. Such management generally results in the optimum production of vegetation, conservation of water, and control of erosion. Sometimes, however, a special need or a specific use may necessitate managing for a plant community other than the potential plant community for the site. Care is needed to ensure that managing for a specific plant community does not increase the susceptibility to erosion. Future uses and the relative ability of a given site to respond to management should be considered if the site is managed for a plant community other than the potential plant community.

The following paragraphs describe the plant communities on the general soil map units in the survey area.

Areas Dominated by Soils on Flood Plains, Fan Piedmonts, and Stream Terraces

General soil map units 1, 2, and 3 are on flood plains, fan piedmonts, and stream terraces. Elevation is 5,200 to 6,700 feet. The average annual precipitation is about 7 to 10 inches. These map units have some of the most productive range sites in the survey area. These sites are used for native hay fed to the base livestock herds through the winter months.

General map unit 1 is in the Steptoe Valley. It consists of nearly level and gently sloping, very deep, poorly drained and well drained soils. The plant communities are dominated by alkali sacaton, alkali cordgrass, basin wildrye, black greasewood, and basin big sagebrush. The vegetation on soils of minor extent in the unit includes inland saltgrass, bottlebrush squirreltail, bluegrass, sedge, rush, and shadscale.

General map unit 2 is in the White River Valley. It consists of nearly level and gently sloping, very deep,

poorly drained and well drained soils. The plant communities are dominated by alkali sacaton, alkali cordgrass, basin wildrye, black greasewood, Torrey quailbush, and Wyoming big sagebrush. The vegetation on soils of minor extent in the unit includes bottlebrush squirreltail and shadscale.

General map unit 3 is at the south end of the Huntington Valley. It consists of nearly level to moderately sloping, poorly drained and well drained soils that are moderately deep over a duripan or are very deep. The plant communities are dominated by basin wildrye, Nevada bluegrass, western wheatgrass, bluebunch wheatgrass, Thurber needlegrass, basin big sagebrush, Wyoming big sagebrush, and black greasewood. The vegetation on soils of minor extent in the unit includes Indian ricegrass and winterfat.

Areas Dominated by Soils on Basin Floors

General soil map units 4 to 9 are on basin floors. They support salt-desert shrub plant communities. Elevation is 5,800 to 6,400 feet. The average annual precipitation is about 7 to 10 inches. These map units provide excellent early spring and winter forage. Rangeland seeding is not recommended because of saline or alkaline soils, a low available water capacity, and low annual precipitation.

Salt-desert shrub plant communities are most valuable as winter range for livestock. They provide high-quality winter forage and usually receive only light snowfall. Most of the desirable forage species in these communities are adversely affected by grazing late in winter (March and April), heavy use, or both. Where native range communities are grazed in winter, a readily available emergency supply of feed is needed to carry livestock through periods of unusually severe weather.

Properly regulated grazing management can enhance the long-term productivity of salt-desert shrub plant communities. This management includes deferment of grazing during critical growth periods, rotational grazing, and control of the intensity and season of use. Fencing, herding, hauling water, and controlling the access of livestock to watering facilities can improve the distribution of grazing and facilitate grazing management. Because of the inherently harsh environment of the salt-desert shrub zone, manipulation of vegetation and revegetation projects generally are not advisable.

Plant communities that are dominated by shadscale or winterfat and associated forbs and grasses provide important winter range for pronghorn. Fencing can hinder migration of the pronghorn, which commonly do not jump fences. The pronghorn can crawl under the fences if the lower wire is high enough. Where feasible, fence lines on pronghorn ranges should be routed for the least disruption of habitual travel lanes. Livestock watering developments

are beneficial to pronghorn and other wildlife if the water supply is available when the animals occupy the area. Few mule deer utilize salt-desert shrub communities, which generally are considered unimportant to deer management. Feral horses use these shrub communities in winter.

General soil map unit 4 is in the Newark Valley. It consists of playas and nearly level, very deep, moderately well drained or well drained soils. The plant community is dominated by bottlebrush squirreltail, basin wildrye, shadscale, black greasewood, and big sagebrush. The vegetation on soils of minor extent in the unit includes Indian ricegrass, alkali sacaton, alkali cordgrass, and winterfat.

General soil map unit 5 is in the Long Valley and the Little Smoky Valley. It consists of nearly level, very deep, moderately well drained and well drained soils. The plant community is dominated by Indian ricegrass, bottlebrush squirreltail, Wyoming big sagebrush, winterfat, and black greasewood. The vegetation on soils of minor extent in the unit includes basin wildrye, alkali sacaton, bluegrass, thickspike wheatgrass, western wheatgrass, needleandthread, and black sagebrush.

General soil map unit 6 is in the Butte Valley. It consists of nearly level, very deep, moderately well drained and well drained soils. The plant community is dominated by basin wildrye, rhizomatous wheatgrass, Indian ricegrass, black greasewood, big sagebrush, and winterfat. The vegetation on soils of minor extent in the unit includes needleandthread, thickspike wheatgrass, alkali sacaton, alkali cordgrass, bluegrass, Wyoming big sagebrush, winterfat, and shadscale.

General soil map unit 7 is in the Jakes Valley. It consists of nearly level, very deep, moderately well drained and well drained soils. The plant community is dominated by thickspike wheatgrass, western wheatgrass, Indian ricegrass, and winterfat. The vegetation on soils of minor extent in the unit includes basin wildrye, Indian ricegrass, bottlebrush squirreltail, needleandthread, alkali sacaton, Wyoming big sagebrush, shadscale, and black sagebrush.

General soil map unit 8 is in the Newark Valley and the Long Valley. It consists of playas and nearly level and gently sloping, very deep, well drained soils. The plant community is dominated by Indian ricegrass, Wyoming big sagebrush, and winterfat. The vegetation on soils of minor extent in the unit includes needleandthread and big sagebrush.

General soil map unit 9 is in the Newark Valley and in the Ruby Marsh Wildlife Refuge. It consists of nearly level, very deep, very poorly drained, poorly drained, and moderately well drained soils. The plant community is dominated by basin wildrye, alkali sacaton, bluegrass,

sedge, rush, black greasewood, and big sagebrush. The vegetation on soils of minor extent in the unit includes bottlebrush squirreltail, shadscale, bulrush, and cattail.

Sandhill cranes, ducks, geese, and other waterfowl use areas of map unit 9 for food and cover, for nesting, and for rearing their young. Several other game and nongame species rely heavily on these areas for their survival.

Plant communities that are dominated by black greasewood and basin big sagebrush provide thermal cover for many wildlife species but have limited value for big game. Because of its spines and coarse structure, black greasewood provides protective cover for nesting birds and small mammals. It has soluble oxalates that may be harmful to livestock, especially sheep, if the new growth is grazed excessively in spring. On late fall and winter ranges, the fruit of black greasewood and shadscale provides nutritious and palatable feed.

Areas Dominated by Soils on Fan Piedmonts

General soil map units 10 to 18 are on fan piedmonts. Elevation is 5,500 to 7,800 feet. The average annual precipitation is 10 to 16 inches.

Map units 10 to 18 are the best areas for rangeland seeding in the survey area. Rangeland seeding may be required following the removal of woody vegetation where desirable understory plants do not occur in the present plant community. Revegetation also may be necessary for critical area treatment following wildfire or other major disturbances. Rangeland seeding of adapted forage species tolerant of early spring grazing can play a key role in grazing management on the adjacent native sagebrush-grass and salt-desert shrub plant communities. Maximum grazing capacity is realized on seeded stands managed for a uniform distribution of grazing. This management prevents the concentration of livestock. Additional water developments or water hauling, fencing, or herding may be required to meet management objectives.

Forage for wildlife, such as pronghorn, mule deer, elk, and sage grouse, can be improved if adapted forbs are included in the seeding. Livestock water developments are beneficial to wildlife, especially deer, elk, and pronghorn, if the water supply available when the animals occupy the area.

The success of rangeland seeding depends on the amount of moisture available during the growing season. Even though adapted species and improved seeding and land treatment techniques may be applied, the likelihood of success is strongly influenced by rainfall. Precipitation in the survey area fluctuates widely in distribution and amount from one year to the next. Years with below normal precipitation are relatively frequent. The unpredictable climate should be considered in addition to the critical soil properties that affect the success of seeding.

Table 5 shows the suitability of the soils in the survey area for rangeland seeding. A variety of factors that influence the success of seeding were considered when the suitability ratings were made. These factors include the climate, the capacity of the soils to store water for plant growth, depth to root-limiting material in or below the soils, equipment-use limitations, limitations caused by erosion, excess salts or sodium, and soil crusting. The limitations that have the greatest impact the suitability of a soil for rangeland seeding are listed in the table. A rating of *well suited* indicates that no significant limitations affect rangeland seeding. A rating of *suitied* indicates a moderate limitation that commonly can be overcome by one or two management practices. These practices greatly increase the likelihood that seeding will be successful. A rating of *poorly suited* indicates a limitation that can be overcome only by intensive and often costly management practices.

Sagebrush-grass communities at low elevations may provide transitional range to pronghorn moving from winter to summer ranges in spring, but pronghorn do not heavily graze plant communities that are dominated by big sagebrush. During periods of severe weather in winter, sage grouse may move into these areas to feed on sagebrush that has not been covered by snow. Because of heavy snow at the higher elevations, chukar partridge move onto these communities where feed is available. The low-elevation sagebrush-grass communities in the survey area are used primarily by elk, mule deer, and feral horses as winter range or as transitional range in spring. Spring grazing by livestock in deer and elk winter range areas should be managed so that the livestock are not turned out until after spring "greenup," when most of the deer and elk have migrated from the areas.

The mid-elevation sagebrush-grass communities are suited to summer and fall range for livestock grazing. Properly regulated grazing management can enhance the long-term productivity of these communities. This management includes deferment of grazing during critical growth periods in spring, rotational grazing, and control of the intensity and season of use. Fences, herding, and the strategic placement of livestock watering facilities can improve the distribution of grazing and facilitate grazing management.

Wyoming big sagebrush communities are used primarily as winter range by mule deer and elk. Sage grouse also use these communities as wintering areas. Low sagebrush communities provide important summer range for pronghorn and brood-rearing habitat for sage grouse. Mountain big sagebrush and low sagebrush communities at the upper extent of this elevation zone provide spring and fall range and summer range for mule deer, elk, and feral horses.

Brush management can be very effective in increasing

native forage production in areas of the sagebrush-grass communities at the mid and upper elevations. Brush management that is implemented primarily to benefit livestock can also be important to wildlife. Opening up large, homogeneous stands of sagebrush commonly is often advantageous to wildlife, such as elk, mule deer, and pronghorn.

Reducing the extent of big sagebrush cover can benefit mule deer, elk, and pronghorn where the habitat needs of these animals are properly identified and planned for in the manipulation of vegetation. Extensive areas that are dominated by big sagebrush are marginal pronghorn habitat. These areas can be treated so that the density and height of sagebrush are decreased. Removal of big sagebrush to enhance the diversity of understory grasses and forbs or to increase the production of green forage on transitional range where shrub cover is excessive can benefit mule deer and elk. Sage grouse is a habitat-specific bird, relying primarily on sagebrush to meet its life requirements. Plans for manipulating sagebrush stands on ranges occupied by sage grouse should provide for the maintenance of suitable sage grouse habitat, especially strutting grounds, or "leks."

An important part of assessing the impact that manipulating vegetation has on wildlife is the role of "edges" in wildlife habitat. An "edge," or ecotone, is a transitional area between plant communities. The structure and dominance of the plants that remain after the manipulation of vegetation differ with the method of treatment used. Fire removes all vegetation, including the skeletons or woody portions of shrubs, and thus eliminates the structure of woody vegetation from the area treated. Prescription burning may enhance the habitat for a number of wildlife species. Mule deer and pronghorn graze in recently burned areas.

Herbicide brush treatments retain the dead skeletons of the shrubs and the shrub structure. Pronghorn generally avoid areas of dead shrub structure for several years after treatment. Herbicides may also kill broad-leaved forbs in the shrub understory, which are staples in the diet of sage grouse and pronghorn.

Chaining and, to a lesser degree, brush beating change the tree-shrub or shrub vegetative structure to grassland. The residue left on the ground creates a microhabitat for small mammals.

Careful planning is needed in the manipulation of sagebrush within ranges occupied by sage grouse. The optimum nesting habitat for this bird is characterized by a 20 to 40 percent crown cover of sagebrush less than 30 inches high. Some treatment of sagebrush, such as reducing the cover from 40 to 20 percent, may not seriously degrade the nesting habitat and can provide the sage grouse more feed.

Livestock grazing can help to maintain or enhance

desired habitat conditions for many wildlife species. Seasonal livestock grazing removes old grass residue and exposes the regrowth of succulent green stems and leaves that mule deer eat. Grazing by cattle in meadow areas can improve the quality of sage grouse feed. Grazing arrests the maturation of plant tissues, thus making forbs more succulent. The succulent, or young, leaf tissue is higher in protein and lower in fiber than mature tissue. As they seek sources of succulent forbs, sage grouse select meadows that have been grazed by cattle. Sage grouse chicks benefit from the cover provided by properly grazed meadows.

Areas that currently have a heterogeneous mixture of vegetative types, including grassland, low shrub, tall shrub, and tree-shrub communities, generally provide an optimum diversity of habitat and wildlife. These types of vegetative complexes are common in the sagebrush-grass zones at the mid and upper elevations. In these areas moderate browsing by cattle on antelope bitterbrush in fall enhances the vigor and production of the bitterbrush and creates a shrub form in which more of the bitterbrush plant structure is left for use by mule deer, elk, and pronghorn.

Rangeland that is on the mid and upper piedmont slopes, butting up to hills and mountains, and that is associated with woodland sites, is readily invaded by singleleaf pinyon and Utah juniper. These areas have not been separated for inventory purposes but could be managed as either rangeland or woodland, depending on the current management objectives of each landowner or land management agency. If the objective is to manage for rangeland, these areas are potentially very productive grass-shrub communities. If the objective is to manage for woodland, the areas produce the best juniper posts and pinyon Christmas trees and the highest volume per acre of fuelwood. Productivity is affected by low or moderate site quality for tree production. Site index ranges from about 30 to 85 (4). The productivity class is 0 to 1. Culmination of the mean annual increment ranges from about 2.2 to 10.6 cubic feet per acre per year.

Annual fuelwood production can range from about 3 to 11 cords per acre in stands where the trees average 5 inches in diameter at a height of 1 foot. Annual post production can range from about 20 to 40 per acre in stands having a canopy cover ranging from 21 to 35 percent. Annual Christmas tree production can range from about 30 to 50 trees per acre when the canopy cover is 21 to 35 percent. Pinyon nut production can range from about 150 to more than 300 pounds per acre in favorable years.

The invasion of singleleaf pinyon and Utah juniper onto sagebrush-grass communities has been attributed to overgrazing, lack of naturally recurring fire, and climatic conditions. Fire readily kills young singleleaf pinyon and

Utah juniper trees. The loss of fine fuels to carry fire and, to a lesser extent, fire suppression efforts, have limited the frequency and extent of natural fires within the sagebrush-grass zone. The reduction in the frequency of natural fires has allowed singleleaf pinyon and Utah juniper seedlings to become established in increasing numbers on sites that once were relatively free of trees. Livestock often concentrate on these woodland sites, taking advantage of the shade and shelter offered by the tree overstory. Mule deer and elk use these woodland communities for thermal cover. Many species of small mammals and birds are associated with the juniper woodlands.

General soil map unit 10 is in the Steptoe Valley. It consists of nearly level and gently sloping, very deep, well drained soils. The plant community is dominated by basin wildrye, bottlebrush squirreltail, shadscale, Indian ricegrass, black greasewood, and big sagebrush. The vegetation on soils of minor extent in the unit includes needleandthread, alkali sacaton, inland saltgrass, thickspike wheatgrass, Wyoming big sagebrush, winterfat, and black sagebrush.

General soil map unit 11 is throughout the survey area. It consists of nearly level to moderately sloping, well drained soils that are shallow over a duripan or are very deep. The plant community is dominated by Indian ricegrass, needleandthread, black sagebrush, and Wyoming big sagebrush. The vegetation on soils of minor extent in the unit includes basin wildrye, thickspike wheatgrass, Thurber needlegrass, bluebunch wheatgrass, winterfat, and shadscale.

General soil map unit 12 is in the western half of the survey area. It consists of gently sloping to strongly sloping, well drained soils that are shallow over a duripan or are very deep. The plant community is dominated by Indian ricegrass, needleandthread, bluebunch wheatgrass, shadscale, and black sagebrush. The vegetation on soils of minor extent in the unit includes Thurber needlegrass, basin wildrye, thickspike wheatgrass, shadscale, Wyoming big sagebrush, mountain big sagebrush, singleleaf pinyon, and Utah juniper.

General soil map unit 13 is in the White River Valley. It consists of nearly level and gently sloping, very deep, well drained soils. The plant community is dominated by Indian ricegrass, galleta, shadscale, winterfat, and Wyoming big sagebrush. The vegetation on soils of minor extent in the unit includes bottlebrush squirreltail, black greasewood, and bud sagebrush.

General soil map unit 14 is in the Huntington Valley. It consists of gently sloping and moderately sloping, well drained soils that are shallow or moderately deep over a duripan. The plant community is dominated by bluebunch wheatgrass, Thurber needlegrass, basin wildrye, and

Wyoming big sagebrush. The vegetation on soils of minor extent in the unit includes Indian ricegrass, needleandthread, black sagebrush, basin big sagebrush, mountain big sagebrush, black greasewood, singleleaf pinyon, and Utah juniper.

General soil map unit 15 is on the west side of the White River Valley. It consists of gently sloping to strongly sloping, well drained soils that are shallow over a duripan or bedrock. The plant community is dominated by Indian ricegrass, needleandthread, bluebunch wheatgrass, and black sagebrush. The vegetation on soils of minor extent in the unit includes Thurber needlegrass, basin wildrye, Wyoming big sagebrush, basin big sagebrush, winterfat, pigmy sagebrush, singleleaf pinyon, and Utah juniper.

General soil map unit 16 is in the southwestern part of the survey area. It consists of gently sloping to moderately steep, well drained soils that are shallow over a duripan or bedrock. The plant community is dominated by Indian ricegrass, needleandthread, bluebunch wheatgrass, and black sagebrush. The vegetation on soils of minor extent in the unit includes Thurber needlegrass, basin wildrye, bluegrass, thickspike wheatgrass, Wyoming big sagebrush, Utah juniper, and singleleaf pinyon.

General soil map unit 17 is in the north end of the Cave Valley. It consists of gently sloping to moderately sloping, well drained soils that are shallow over a duripan or are very deep. The plant community is dominated by Thurber needlegrass, basin wildrye, Indian ricegrass, thickspike wheatgrass, bluebunch wheatgrass, Wyoming big sagebrush, winterfat, and black sagebrush. The vegetation on soils of minor extent in the unit includes needleandthread, basin big sagebrush, singleleaf pinyon, and Utah juniper.

General soil map unit 18 is in the western part of the survey area. It consists of gently sloping to strongly sloping, well drained soils that are moderately deep over a duripan or are very deep. The plant community is dominated by needleandthread, bluebunch wheatgrass, Thurber needlegrass, Wyoming big sagebrush, and mountain big sagebrush. The vegetation on soils of minor extent in the unit includes Indian ricegrass, shadscale, black sagebrush, and basin big sagebrush.

Areas Dominated by Soils on Hills and Mountains

General soil map units 19 to 28 are on hills and mountains. Elevation is 6,000 to 10,900 feet. The average annual precipitation is 10 to 16 inches in the hills and 14 to more than 25 inches in the mountains. These map units have almost all of the woodland in the survey area and most of the summer range for livestock and wildlife.

Vegetative sites on deep, productive soils provide abundant and diverse forage. These high-elevation sites

remain cold and wet through spring and into early summer. They are used as summer range for livestock. Livestock grazing should be delayed on these sites until the surface soil has dried sufficiently to withstand grazing pressure. Snow often blankets the sites by late fall, further restricting the period of livestock use.

Seeps and springs are common at these elevations. Livestock water generally is readily available. Additional water developments may be necessary, however, to achieve good livestock distribution. Spring developments, pipelines, and storage tanks are dependable means of supplying water. Steeply sloping terrain is common throughout the high-elevation sagebrush-grass zone. Livestock tend to overuse the less sloping areas unless the sites are managed for an even distribution of grazing. Fences, watering facilities, and herding can force livestock to use of areas that otherwise might not be grazed. Salt and mineral blocks should be located away from water.

Riparian areas or meadows are interspersed throughout the sagebrush-grass zone at the mid and upper elevations. Stringer meadows are in areas along spring-fed stream channels where moisture is available to plants throughout most of the growing season. Meadow vegetation also grows on the periphery of seeps and springs. In light of the relatively small extent of their total area, the riparian zones are disproportionately important in the survey area. Their importance is related primarily to the presence of free water, the greater productivity and longer growing period of the riparian vegetation influenced by this extra moisture, the diversity of plant species, and the structural diversity of the riparian vegetation. Riparian zones along stream channels are typically linear. Their linear nature maximizes the edge effect between them and the adjacent upland areas. These edges are commonly richer in wildlife than either of the adjoining communities. Overgrazing of the riparian vegetation by livestock can reduce water quality, eliminate streamside shrubs, cause soil compaction, accelerate erosion, and erode streambanks. Proper rangeland management requires special attention to riparian zones. Grazing management strategies should be sensitive to the development and maintenance of healthy riparian areas.

Seeps and springs can be developed to provide water to both livestock and wildlife. Fencing the meadow surrounding a seep or spring can exclude livestock and thus protect the meadow vegetation for wildlife. The water can be piped to areas outside the enclosure into troughs or other storage facilities. Piping overflow water from livestock troughs into fenced areas can create small meadows and maintain their vegetation. Many naturally occurring meadows in areas of the sagebrush-grass communities at the mid and upper elevations have been heavily invaded by big sagebrush, which robs moisture

from the meadows. If the sagebrush is removed, the quantity of water can be improved and the duration of water flow can be increased as the grassland aspect of the meadow vegetation returns.

Generally, map units 19 to 28 are too steep to be seeded with ground equipment and require aerial seeding methods. In most areas, enough native seed sources are available and the potential for site response is high enough for the areas to revegetate naturally after a fire or severe overgrazing.

The most common woodland sites in the survey area are as follows: singleleaf pinyon-Utah juniper-black sagebrush, singleleaf pinyon-Utah juniper-mountain big sagebrush, singleleaf pinyon-curleaf mountainmahogany-mountain big sagebrush, and white fir-limber pine-bristlecone pine-mountain big sagebrush.

The singleleaf pinyon-Utah juniper-black sagebrush woodland is of low or moderate site quality. Site index ranges from 30 to 70 (4). The productivity class is 0.2 to 0.5. Culmination of the mean annual increment ranges from 2.2 to 7.8 cubic feet per acre per year. Annual fuelwood production ranges from 3 to 9 cords in stands where the trees average 5 inches in diameter at a height of 1 foot. In favorable years, Christmas tree production ranges from 30 to 50 trees per acre and pinyon nut production averages 150 to 300 pounds per acre.

The singleleaf pinyon-Utah juniper-mountain big sagebrush woodland is of low or moderate site quality. Site index ranges from 30 to 50 (4). The productivity class is 0. Culmination of the mean annual increment ranges from 2.2 to 4.6 cubic feet per acre per year. Annual fuelwood production ranges from 2 to 6 cords in stands where the trees average 5 inches in diameter at a height of 1 foot. In favorable years, Christmas tree production ranges from 5 to 10 trees per acre and pinyon nut production averages 150 to 200 pounds per acre.

The singleleaf pinyon-curleaf mountainmahogany-mountain big sagebrush woodland is of moderate site quality. Site index ranges from 61 to 85 (4). The productivity class is 1. Culmination of the mean annual increment ranges from 6.1 to 10.6 cubic feet per acre per year. Annual fuelwood production ranges from 7 to 11 cords in stands where the trees average 5 inches in diameter at a height of 1 foot. In favorable years, Christmas tree production ranges from 10 to 20 trees per acre and pinyon nut production averages more than 300 pounds per acre.

The white fir-limber pine-bristlecone pine-mountain big sagebrush woodland is of low site quality. Site index ranges from 30 to 40 (6). The productivity class is 4. Culmination of the mean annual increment ranges from less than 51 cubic feet to 64 cubic feet per acre per year. Annual fuelwood production ranges from 20 to 40 cords in stands where the trees average 30 to 40 feet in height

and are 70 years old. The annual tree volume ranges from less than 2,100 cubic feet to 2,700 cubic feet per acre in stands where the trees average 30 to 40 feet in height and are 70 years old.

Table 6 can be used by woodland owners or forest managers in planning the use of soils for wood crops. Only those soils suitable for wood crops are listed. The table lists the ordination (woodland suitability) symbol for each soil. Soils assigned the same ordination symbol require the same general management and have about the same potential productivity.

The first part of the *ordination symbol*, a number, indicates the potential productivity of the soils for important trees. The number 1 indicates very high productivity; 2, high; 3, moderately high; 4, moderate; and 5, low. The second part of the symbol, a letter, indicates the major kind of soil limitation. The letter X indicates stoniness or rockiness; W, excessive water in or on the soil; T, toxic substances in the soil; D, restricted rooting depth; C, clay in the upper part of the soil; S, sandy texture; F, high content of rock fragments in the soil; and R, steep slopes. The letter O indicates that limitations or restrictions are insignificant. If a soil has more than one limitation, the priority is as follows: X, W, T, D, C, S, F, and R.

In table 6, *slight*, *moderate*, and *severe* indicate the degree of the major soil limitations to be considered in management.

Ratings of the *erosion hazard* indicate the risk of soil loss on well managed woodland. The risk is *slight* if the expected soil loss is small, *moderate* if measures are needed to control erosion during logging and road construction, and *severe* if intensive management or special equipment and methods are needed to prevent excessive soil loss.

Ratings of *equipment limitation* reflect the characteristics and conditions of the soil that restrict use of the equipment generally needed in woodland management or harvesting. A rating of *slight* indicates that the use of equipment is not limited to a particular kind of equipment or time of year; *moderate* indicates a short seasonal limitation or a need for some modification in management or in equipment; and *severe* indicates a seasonal limitation, a need for special equipment or management, or a hazard in the use of equipment.

Seedling mortality ratings indicate the degree to which the soil affects the mortality of tree seedlings. Plant competition is not considered in the ratings. The ratings apply to seedlings from good stock that are properly planted during a period of sufficient rainfall. A rating of *slight* indicates that the expected mortality is less than 25 percent; *moderate*, 25 to 50 percent; and *severe*, more than 50 percent.

Ratings of *windthrow hazard* are based on soil

characteristics that affect the development of tree roots and the ability of the soil to hold trees firmly. A rating of *slight* indicates that few trees may be blown down by strong winds; *moderate*, that some trees will be blown down during periods of excessive soil wetness and strong winds; and *severe*, that many trees are blown down during periods of excessive soil wetness and moderate or strong winds.

The *potential productivity* of merchantable or *common trees* on a soil is expressed as a *site index* and a *productivity class*. Site index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. For pinyon and juniper woodland, the site index is based on the tree diameter at a height of 1 foot and the distance between trees. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that woodland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

The *productivity class*, a number, is the yield likely to be produced by the most important trees. The yield is expressed as cubic meters per hectare per year calculated at the age of culmination of mean annual increment for fully stocked natural stands.

General soil map unit 19 is throughout the survey area. It consists of strongly sloping to steep, shallow, well drained soils. The plant community is dominated by Indian ricegrass, Thurber needlegrass, bluebunch wheatgrass, black sagebrush, mountain big sagebrush, singleleaf pinyon, and Utah juniper. The vegetation on soils of minor extent in the unit includes galleta and Wyoming big sagebrush.

General soil map unit 20 is throughout the survey area. It consists of moderately steep and steep, very shallow and shallow, well drained soils. The plant community is dominated by Indian ricegrass, bluebunch wheatgrass, black sagebrush, littleleaf mountainmahogany, singleleaf pinyon, and Utah juniper. The vegetation on soils of minor extent in the unit includes galleta and Wyoming big sagebrush.

General soil map unit 21 is mainly in the north-central part of the survey area. It consists of moderately steep and steep, shallow and moderately deep, well drained soils. The plant community is dominated by bluebunch wheatgrass, Indian ricegrass, black sagebrush, curlleaf mountainmahogany, and singleleaf pinyon. The vegetation on soils of minor extent in the unit includes Thurber needlegrass, mountain big sagebrush, and Utah juniper.

General soil map unit 22 is mainly in the Egan Range. It consists of moderately steep to very steep, very shallow to moderately deep, well drained soils. The plant community is dominated by bluebunch wheatgrass, black sagebrush, mountain big sagebrush, littleleaf

mountainmahogany, curleaf mountainmahogany, singleleaf pinyon, and Utah juniper. The vegetation on soils of minor extent in the unit includes Columbia needlegrass, black sagebrush, white fir, limber pine, and bristlecone pine.

General soil map unit 23 is mainly in the central part of the survey area. It consists of moderately steep and steep, shallow and moderately deep, well drained soils. The plant community is dominated by bluebunch wheatgrass, Thurber needlegrass, antelope bitterbrush, mountain big sagebrush, singleleaf pinyon, and Utah juniper. The vegetation on soils of minor extent in the unit includes Indian ricegrass, black sagebrush, and curleaf mountainmahogany.

General soil map unit 24 is in the southern part of the Egan and Schell Creek Ranges. It consists of steep and very steep, very shallow and moderately deep, well drained soils. The plant community is dominated by bluebunch wheatgrass, black sagebrush, mountain big sagebrush, littleleaf mountainmahogany, curleaf mountainmahogany, and singleleaf pinyon. The vegetation on soils of minor extent in the unit includes Utah juniper, white fir, limber pine, and bristlecone pine.

General soil map unit 25 is mainly in the Diamond Mountains. It consists of moderately steep and steep, shallow and very deep, well drained soils. The plant community is dominated by bluebunch wheatgrass, Thurber needlegrass, low sagebrush, black sagebrush, and mountain big sagebrush. The vegetation on soils of minor extent in the unit includes curleaf mountainmahogany, singleleaf pinyon, and Utah juniper.

General soil map unit 26 is in mountains in the northern part of the survey area. It consists of moderately steep and steep, shallow, deep and very deep, well drained soils. The plant community is dominated by bluebunch wheatgrass, Columbia needlegrass, mountain big sagebrush, and curleaf mountainmahogany. The vegetation on soils of minor extent in the unit includes black sagebrush.

General soil map unit 27 is in the northern part of the Egan Range. It consists of moderately steep to very steep, shallow to deep, well drained soils. The plant community is dominated by bluebunch wheatgrass, spike-fescue, mountain big sagebrush, curleaf mountainmahogany, white fir, and limber pine. The vegetation on soils of minor extent in the unit includes mountain brome, Columbia needlegrass, bluebunch wheatgrass, Thurber needlegrass, Scribner needlegrass, low sagebrush, black sagebrush, mountain gooseberry, littleleaf mountainmahogany, Engelmann spruce, and bristlecone pine.

General soil map unit 28 is in the southern part of the survey area. It consists of strongly sloping to steep,

shallow, well drained soils. The plant community is dominated by bluegrass, galleta, bluebunch wheatgrass, black sagebrush, mountain big sagebrush, singleleaf pinyon, and Utah juniper. The vegetation on soils of minor extent in the unit includes Thurber needlegrass, singleleaf pinyon, and Wyoming big sagebrush.

Windbreaks and Environmental Plantings

Windbreaks are established to protect livestock, buildings, and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low- and tall-growing broad-leaved and coniferous species provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. A healthy planting stock of suitable species planted properly on a well prepared site and maintained in good condition can ensure a high degree of plant survival.

Windbreaks are planted on a limited basis in this survey area. They may be desirable for protection of livestock and buildings. Any windbreak in the area requires irrigation.

The species selected for planting on a given site should be suited to the soils on the site. The species suited to deep, well drained soils include Fremont cottonwood, Siberian elm, Scotch pine, cotoneaster, and caragana. Poplar, cottonwood, Russian-olive, golden willow, buffaloberry, redosier dogwood, honeysuckle, and rugosa rose are suited to wet soils. The species suited to saline-alkali soils include Siberian elm, mulberry, Russian-olive, buffaloberry, and fourwing saltbush. The species suited to shallow soils include honeylocust, Rocky Mountain juniper, chokecherry, cotoneaster, currant, and caragana.

Recreation

Restrictive soil features, such as wetness, slope, and texture of the surface layer, are considered when a particular site is evaluated for recreational development. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to

public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation are also important. Soils subject to flooding are limited for recreational uses by the duration and intensity of flooding and by the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

Camp areas, picnic areas, playgrounds, paths and trails, and golf fairways require special attention.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils are gently sloping and are not wet or subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing camping sites.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes or stones or boulders that increase the cost of shaping sites or of building access roads and parking areas.

Playgrounds require soils that can withstand intensive foot traffic. The best soils are almost level and are not wet or subject to flooding during the season of use. The surface is free of stones and boulders, is firm after rains, and is not dusty when dry. If grading is needed, the depth of the soil over bedrock or a hardpan should be considered.

Paths and trails for hiking and horseback riding should require little or no cutting and filling. The best soils are not wet, are firm after rains, are not dusty when dry, and are not subject to flooding more than once a year during the period of use. They have moderate slopes and few or no stones or boulders on the surface.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. The best soils for use as golf fairways are firm when wet, are not dusty when dry, and are not subject to prolonged flooding during the period of use. They have moderate slopes and no stones or boulders on the surface. The suitability of the soil for tees or greens is not considered in rating the soils.

Information about the ratings for various recreational uses can be obtained from the local offices of the Natural Resources Conservation Service.

Engineering

Table 7 provides information for planning land uses related to urban development and water management. It gives ratings for shallow excavations; local roads and streets; roadfill; sand; gravel; and embankments, dikes, and levees. Information about other engineering uses can be obtained from the local offices of the Natural Resources Conservation Service.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kind of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water

conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Ratings for Selected Uses

In table 7, the soils are rated for various uses and the most limiting features are identified. The ratings are based on observed performance of the soils, on the estimated data given in the map unit descriptions, and on lab test data. In this section the ratings for each use and the limiting features are defined.

Soil interpretations are periodically updated as more is learned about a soil and its behavior under specific uses. New technology can change the relative suitability of a soil for various uses; however, the soil maps remain useful after the soil interpretations originally published with them have become outdated. The Appendix shows the criteria and guidelines that were used to make the interpretations given in table 7. These criteria have been taken directly from the National Soils Handbook (8).

The limitations for shallow excavations, local roads and streets, and embankments, dikes, and levees are considered *slight* if the soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if the soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock, a cemented pan, or a very firm dense layer; stone content; soil texture; and slope. The time of the year that excavations can be made is affected by the depth to a seasonal high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture and depth to the water table.

Local roads and streets have an all-weather surface

and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or stabilized soil material; and a flexible or rigid surface. Cuts and fills generally are limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to bedrock or to a cemented pan, a high water table, flooding, large stones, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification of the soil), the shrink-swell potential, the potential for frost action, and the depth to a high water table affect the traffic-supporting capacity.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even more than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In table 7, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help to determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by large stones, a high water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength

(as inferred from the engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel, or both. They have at least 5 feet of suitable material, a low shrink-swell potential, few cobbles and stones, and slopes of 15 percent or less. Depth to the water table is more than 3 feet. Soils rated *fair* are more than 35 percent silt- and clay-sized particles and have a plasticity index of less than 10. They have a moderate shrink-swell potential, slopes of 15 to 25 percent, or many stones. Depth to the water table is 1 to 3 feet. Soils rated *poor* have a plasticity index of more than 10, a high shrink-swell potential, many stones, or slopes of more than 25 percent. They are wet and have a water table at a depth of less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

The soils are rated in table 7 as a probable or improbable source of *sand* and *gravel*. The ratings are based on soil properties and site features that affect the removal of the soil and its use as construction material. Normal compaction, minor processing, and other standard construction practices are assumed. Each soil is evaluated to a depth of 5 or 6 feet.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. Only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.

The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the taxonomic unit descriptions. Gradation of grain sizes is given in the table on engineering index properties.

A soil rated as a *probable* source has a layer of clean sand or gravel or a layer of sand or gravel that is as much as 12 percent silty fines. This material must be at least 3 feet thick and less than 50 percent, by weight, large stones. All other soils are rated as an *improbable* source. Coarse fragments of soft bedrock, such as shale and siltstone, are not considered to be sand and gravel.

The limiting features affecting engineering uses of the soils in this survey area are as follows:

Area reclaim.—The area is difficult to reclaim after the removal of soil for construction or other uses.

Cemented pan.—A cemented pan is too close to the surface for the specified use.

Cutbanks cave.—The walls of excavations tend to cave in or slough.

Depth to rock.—Bedrock is too near the surface for the specified use.

Droughty.—The soil holds too little water for plants during dry periods.

Erodes easily.—The soil is easily eroded by water.

Excess fines.—As a result of an excessive amount of silt and clay, the soil is not a source of gravel or sand for use in construction.

Excess salts.—The soil has excess water-soluble salts that restrict the growth of plants.

Excess sodium.—The soil has excess exchangeable sodium that restricts the growth of plants.

Flooding.—The soil is flooded by moving water from stream overflow or runoff.

Frost action.—The moisture in the soil freezes and thaws. Frost action can damage roads, buildings, and other structures.

Hard to pack.—The soil is difficult to compact.

Large stones.—The soil has rock fragments that are 3 inches (7.6 centimeters) in diameter or more.

Low strength.—The soil is not strong enough to support a load.

Piping.—Water moving through the soil forms subsurface tunnels or pipelike cavities.

Ponding.—Water stands on the soil in closed depressions. Unless the soil is artificially drained, the water can be removed only by percolation or evapotranspiration.

Rooting depth.—The soil is shallow to a layer that greatly restricts roots. It has a shallow root zone.

Seepage.—The movement of water through the soil adversely affects the specified use of the soil.

Shrink-swell.—The soil shrinks when dry and swells when wet.

Slope.—The slope is steep enough for special practices to be required to ensure satisfactory performance of the soil for a specified use.

Small stones.—The soil has rock fragments that are less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Soil blowing.—The soil is easily eroded by wind.

Too arid.—The soil is dry most of the time, and vegetation is difficult to establish.

Too clayey.—The soil is slippery and sticky when wet and is slow to dry.

Too crusty.—Crusting of the soil surface interferes with water intake and seeding emergence.

Too sandy.—The soil is soft and loose; it is droughty and low in fertility.

Wetness.—The soil is wet during the period of use.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of water and soil features listed in tables are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine grain-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent water and soil features also are given.

Engineering Index Properties

Table 8 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 to 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each taxonomic unit under the heading "Soil Series and Their Morphology."

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is as much as 15 percent, an appropriate modifier is

added; for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the system adopted by the American Association of State Highway and Transportation Officials (1) and the Unified Soil Classification System (2).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification; for example, GM-GC.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

Rock fragments larger than 3 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of grain-size distribution, liquid limit, and plasticity index are rounded to the nearest 5 percent.

Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is omitted in the table.

Physical and Chemical Properties

Table 9 shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each taxonomic unit under the heading "Soil Series and Their Morphology."

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each major soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $\frac{1}{3}$ -bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In this table, the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability refers to the ability of a soil to transmit water or air. The estimates indicate the rate of downward movement of water when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each major soil layer. The capacity varies,

depending on soil properties that affect the retention of water and the depth of the root zone. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table and in the detailed map unit descriptions. Salinity affects the suitability of a soil for crop production, the stability of the soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

If the shrink-swell potential is rated moderate or high, shrinking and swelling can cause damage to roads, buildings, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; and *high*, more than 6 percent. *Very high*, more than 9 percent, is sometimes used.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) to predict the average rate of soil loss by sheet and rill erosion in tons

per acre per year. The estimates are based primarily on percentage of silt, very fine sand, sand, and organic matter (as much as 4 percent) and on soil structure and permeability. The estimates are modified by the presence of rock fragments. Values of K range from 0.02 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion.

Erosion factor T is an estimate of the maximum average rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their resistance to wind erosion in cultivated areas. The groups indicate the susceptibility of soil to wind erosion. Soils are grouped according to the following distinctions:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.
- 4L. Calcareous loams, silt loams, clay loams, and silty clay loams that have less than 35 percent clay.
4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that have more than 35 percent clay.
5. Noncalcareous loams and silt loams that have less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that have more than 20 percent clay and noncalcareous clay loams that have less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that have less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of rock fragments on the surface or because of surface wetness.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 9, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

Soil and Water Features

Table 10 gives estimates of various water features, and table 11 gives estimates of various soil features. The estimates are used in land use planning that involves

engineering considerations. The following paragraphs describe the headings in the two tables.

Hydrologic soil groups are used to estimate runoff from precipitation. Soils are assigned to one of four groups. They are grouped according to the infiltration of water when the soils are thoroughly wet and receive precipitation from long-duration storms. Vegetative cover is not considered when the soils are assigned to hydrologic soil groups.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Flooding, the temporary covering of the soil surface by flowing water, is caused by overflow from streams, by runoff from adjacent slopes, or by inflow from high tides. Shallow water standing or flowing for short periods after rainfall or snowmelt is not considered to be flooding. Standing water in swamps and marshes or in closed depressions is considered to be ponding.

Table 10 gives the frequency and duration of flooding and the time of year when flooding is most likely.

Frequency, duration, and probable dates of occurrence are estimated. Frequency is expressed as none, rare, occasional, and frequent. *None* means that flooding is not probable, *rare* that it is unlikely but is possible under unusual weather conditions (the chance of flooding is nearly 0 percent to 5 percent in any year), *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year), and *frequent* that it occurs often under normal weather conditions (the chance of flooding is more than 50 percent in any year). Duration is expressed as *very brief* if less

than 2 days, *brief* if 2 to 7 days, *long* if 7 days to 1 month, and *very long* if more than 1 month. Probable dates are expressed in months. About two-thirds to three-fourths of all flooding occurs during the stated period.

The information on flooding is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and level of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

High water table (seasonal) is the highest level of a saturated zone in the soil in most years. The estimates are based mainly on the evidence of a saturated zone, namely grayish colors or mottles in the soil. Indicated in table 10 are the depth to the seasonal high water table, the kind of water table, and the months of the year that the water table usually is highest. A water table that is seasonally high for less than 1 month is not indicated in the table. An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil.

Two numbers in the column showing depth to the water table indicate the normal range in depth to a saturated zone. Depth is given to the nearest half foot. The first numeral in the range indicates the highest water level. A plus sign preceding the range in depth indicates that the water table is above the surface of the soil. "More than 6.0" indicates that the water table is below a depth of 6 feet or that it is within a depth of 6 feet for less than a month.

Depth to bedrock is given if bedrock is within a depth of 5 feet. The depth is based on many soil borings and on observations during soil mapping. The rock is specified as either soft or hard. If the rock is soft or fractured, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

A *cemented pan* is a cemented or indurated subsurface layer within a depth of 5 feet. Such a pan causes difficulty

in excavation. Pans are classified as thin or thick. A thin pan is one that is less than 3 inches thick if continuously indurated or less than 18 inches thick if discontinuous or fractured. Excavations can be made by trenching machines, backhoes, or small rippers. A thick pan is one that is more than 3 inches thick if continuously indurated or more than 18 inches thick if it is discontinuous or fractured. Such a pan is so thick or massive that blasting or special equipment is needed in excavation.

Potential frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage mainly to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that dissolves or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion is also expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (7). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 12 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Eleven soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Aridisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Orthid (*Orth*, meaning true, plus *id*, from Aridisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Camborthids (*Camb*, meaning change, plus *orthid*, the suborder of Aridisols that has undergone minimal change).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other known kind of soil. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Camborthids.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where

there is much biological activity. Among the properties and characteristics considered are particle-size class, mineral content, temperature regime, thickness of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, mesic Typic Camborthids.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the substratum can differ within a series.

Taxonomic Units and Their Morphology

In this section, each taxonomic unit recognized in the survey area is described. The descriptions are arranged in alphabetic order.

Characteristics of the soil and the material in which it formed are identified for each unit. A pedon, a small three-dimensional area of soil, that is typical of the unit in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (9). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (7). Unless otherwise stated, colors in the descriptions are for dry soil. Following the pedon description is the range of important characteristics of the soils in the unit.

The map units of each taxonomic unit are described in the section "Detailed Soil Map Units."

Abgese Series

The Abgese series consists of very deep, well drained soils that formed in alluvium or colluvium derived from tuffaceous sedimentary rocks. These soils are on fan piedmont remnants and on the summits and side slopes of hills. Slopes are 2 to 15 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Xerollic
Haplargids

Typical pedon: Abgese sandy loam, in map unit 920:

- A—0 to 4 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 4/3) moist; weak thin platy structure; soft, very friable, nonsticky and nonplastic; few fine vesicular pores; 10 percent pebbles; moderately alkaline (pH 8.0); abrupt smooth boundary. (1 to 8 inches thick)
- Bt1—4 to 9 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate coarse prismatic structure parting to moderate fine subangular blocky; slightly hard, friable, sticky and plastic; many very fine to medium roots; common very fine tubular pores; few thin patchy clay films on faces of peds; 15 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (5 to 12 inches thick)
- Bt2—9 to 22 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate coarse prismatic structure parting to moderate fine and medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine tubular pores; few thin patchy clay films on faces of peds; 15 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary. (4 to 13 inches thick)
- 2Btk—22 to 43 inches; very pale brown (10YR 7/4) very gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few fine roots; common fine tubular pores; few thin patchy clay films on faces of peds; common patchy lime coatings on the underside of pebbles; 35 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (12 to 21 inches thick)
- 2Bkq—43 to 60 inches; light yellowish brown (10YR 6/4) very gravelly loamy sand, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; few medium masses of silica cementation; few patchy lime coatings on the underside of pebbles; 50 percent pebbles; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; in Jakes Valley; about 2 miles south of U.S. Highway 50; about 2,000 feet south and 400 feet east of the projected northwest corner of sec. 27, T. 18 N., R. 60 E.; north latitude of 39 degrees, 23 minutes, 49 seconds; west longitude of 115 degrees, 12 minutes, 54 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through spring, dry from summer through midfall

Soil temperature: 47 to 52 degrees F

Depth to carbonates: 14 to 24 inches

Control section:

Clay content—average of 18 to 25 percent

Content of rock fragments—15 to 35 percent, mainly pebbles

Sand content—more than 35 percent medium and coarse sand

A horizon:

Value—5 to 7 dry

Chroma—2 or 3

Bt horizon:

Value—5 or 6 dry

Chroma—3 or 4 moist

Texture—gravelly sandy loam or gravelly sandy clay loam

Structure—subangular blocky or prismatic

Consistence—slightly hard or hard

Clay content—18 to 30 percent

Content of rock fragments—15 to 35 percent, mainly pebbles

Btk horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Bk or Bkq horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 or 4 moist

Texture—very gravelly loamy sand or very gravelly sandy loam

Content of rock fragments—35 to 60 percent, mainly pebbles

Other features—few masses of silica cementation in some pedons

Adobe Series

The Adobe series consists of shallow, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on the side slopes of mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 18 inches, and the mean annual air temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic Lithic Cryoborolls

Typical pedon: Adobe very gravelly silt loam, in map unit 850; in an area where pebbles cover about 85 percent of the surface:

- A1—0 to 2 inches; light brownish gray (10YR 6/2) very gravelly silt loam, dark brown (10YR 3/3) moist; moderate thick platy structure; slightly hard, very

friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine and fine vesicular pores; 40 percent pebbles; slightly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (1 to 3 inches thick)

A2—2 to 5 inches; brown (10YR 5/3) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; many very fine tubular and interstitial pores; common thin lime coatings on the underside of pebbles; 50 percent pebbles; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 5 inches thick)

Bk1—5 to 11 inches; brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine and medium roots; many very fine tubular pores; common moderately thick lime coatings on the underside of pebbles; 45 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (4 to 10 inches thick)

Bk2—11 to 17 inches; brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; common very fine tubular pores; common thick and moderately thick lime pendants and common moderately thick lime coatings on the underside of pebbles; 50 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (4 to 10 inches thick)

2R—17 inches; hard, fractured limestone.

Type location: White Pine County, Nevada; about 2 miles south of Little Antelope Summit; about 2,000 feet east and 2,300 feet south of the northwest corner of sec. 5, T. 18 N., R. 58 E.; north latitude of 39 degrees, 22 minutes, 23 seconds; west longitude of 115 degrees, 28 minutes, 4 seconds

Range in Characteristics

Soil moisture: Usually moist; moist from winter through midspring, dry from late spring through fall

Soil temperature: 38 to 45 degrees F

Average summer soil temperature: 54 to 59 degrees F

Mollic epipedon: 14 to 20 inches thick; chroma darker than 5.5 dry, 3.5 moist, after mixing of the uppermost 7 inches

Depth to bedrock: 14 to 20 inches

Control section:

Clay content—18 to 27 percent

Content of rock fragments—35 to 60 percent pebbles
Texture—very gravelly silt loam or very gravelly loam
Calcium carbonate equivalent—40 to 60 percent in the fraction less than 20 mm in size

Bk horizon:

Secondary carbonates—5 to 20 percent thin or moderately thick, soft lime coatings on the underside of pebbles and 5 to 20 percent thin or moderately thick lime pendants on the underside of pebbles in the lower part

Alley Series

The Alley series consists of very deep, well drained soils that formed in loess over alluvium derived from andesite. These soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Durixerollic Haplargids

Typical pedon: Alley gravelly sandy loam, in map unit 1251; in an area where pebbles cover about 30 percent of the surface:

A—0 to 4 inches; light brownish gray (10YR 6/2) gravelly sandy loam, brown (10YR 4/3) moist; moderate medium platy structure; slightly hard, friable, sticky and slightly plastic; common very fine to medium roots; common fine vesicular and interstitial pores; 25 percent pebbles; mildly alkaline (pH 7.6); abrupt smooth boundary. (2 to 10 inches thick)

Bt—4 to 16 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and slightly plastic; many very fine to medium roots; common fine tubular pores; common thin clay films on faces of peds; 15 percent pebbles; mildly alkaline (pH 7.7); abrupt wavy boundary. (6 to 20 inches thick)

Bqk1—16 to 33 inches; white (10YR 8/2) gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; very hard, firm, slightly sticky and nonplastic; few very fine and fine roots; common fine tubular pores; many moderately cemented or strongly cemented masses of lime; continuous lime coatings on pebbles and cobbles; 25 percent pebbles and 5 percent cobbles; violently effervescent; weak silica and lime cementation; moderately alkaline (pH 8.3); clear smooth boundary. (3 to 17 inches thick)

Bqk2—33 to 50 inches; light brownish gray (10YR 6/2) gravelly sandy loam, yellowish brown (10YR 5/4)

moist; massive; hard, firm, slightly sticky and nonplastic; few fine and medium roots; common fine tubular pores; continuous lime coatings on pebbles; few thin discontinuous silica laminae; 25 percent pebbles; strongly effervescent; weak continuous silica and lime cementation; strongly alkaline (pH 8.5); clear wavy boundary. (3 to 17 inches thick)

2Bk—50 to 60 inches; light yellowish brown (10YR 6/4) very gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, slightly sticky and nonplastic; common fine tubular pores; some pebbles with partial, thin lime coatings on the underside; 40 percent pebbles; strongly effervescent; common white (10YR 8/2) fine and medium filaments and soft masses of lime; strongly alkaline (pH 8.7).

Type location: White Pine County, Nevada; almost in the south end of Butte Valley; about 2,600 feet south and 2,600 feet east of the northwest corner of sec. 18, T. 19 N., R. 62 E.; north latitude of 39 degrees, 30 minutes, 52 seconds; west longitude of 115 degrees, 2 minutes, 18 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Depth to strata with weak silica and lime cementation: 16 to 30 inches

Depth to carbonates: 16 to 22 inches

Other features: Few to many fine to coarse lime segregations in most pedons where depth to the Bqk horizon is more than 22 inches

A horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3

Reaction—neutral or mildly alkaline

Other features—when the uppermost 7 inches is mixed, value of more than 5.5 dry, more than 3.5 moist

Bt horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—2 to 4

Texture—gravelly loam, gravelly clay loam, or gravelly sandy clay loam

Clay content—20 to 30 percent

Content of rock fragments—15 to 30 percent, mainly pebbles

Structure—weak or moderate, fine to coarse subangular blocky

Reaction—mildly alkaline or moderately alkaline

Bqk horizon:

Value—6 to 8 dry, 4 to 6 moist

Chroma—1 to 4

Texture—gravelly fine sandy loam, gravelly sandy loam, or cobbly fine sandy loam

Content of rock fragments—15 to 35 percent, mainly pebbles and cobbles

Consistence—hard or very hard

Reaction—moderately alkaline or strongly alkaline

Silica cementation—few thin or very thin

discontinuous silica laminae in some pedons;

durinodes in a friable matrix below the weakly cemented horizons in some pedons

2Bk horizon (if it occurs):

Content of rock fragments—40 to 60 percent, when mixed, mostly pebbles and cobbles, but also a few stones in some pedons

Amelar Series

The Amelar series consists of deep, well drained soils that formed in colluvium and alluvium derived from limestone, sandstone, and tuff. These soils are on partial ballenas, fan piedmont remnants, and the side slopes of mountains and hills. Slopes are 2 to 50 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Calcic Argixerolls

Typical pedon: Amelar gravelly silt loam, in map unit 870; in an area where pebbles cover about 30 percent of the surface:

A1—0 to 3 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark brown (10YR 2/2) moist; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 20 percent pebbles; few thin lime coatings on the underside of pebbles; moderately alkaline (pH 7.9); abrupt smooth boundary. (1 to 5 inches thick)

A2—3 to 7 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine to coarse roots; many very fine tubular and interstitial pores; 25 percent pebbles and 5 percent cobbles; few thin lime coatings on the underside of rock fragments; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 5 inches thick)

Bt—7 to 11 inches; grayish brown (10YR 5/2) very cobbly silty clay loam, very dark grayish brown (10YR 3/2)

moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; many very fine and common fine to coarse roots; many very fine tubular pores; few thin clay films on faces of peds and lining pores; 30 percent pebbles and 20 percent cobbles; few moderately thick lime coatings on the underside of rock fragments; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (3 to 6 inches thick)

Btk—11 to 15 inches; brown (10YR 5/3) very cobbly silty clay loam, dark brown (10YR 3/3) moist; hard, friable, sticky and slightly plastic; many very fine and few fine to coarse roots; many very fine tubular pores; few thin clay films on faces of peds and lining pores; 35 percent pebbles and 20 percent cobbles; few moderately thick lime coatings on rock fragments and many pendants on their underside; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (3 to 6 inches thick)

Bk1—15 to 23 inches; pale brown (10YR 6/3) very gravelly silt loam, brown (10YR 5/3) moist; moderate coarse subangular blocky structure; hard, friable, sticky and slightly plastic; many very fine and few fine and medium roots; many very fine tubular pores; 45 percent pebbles and 10 percent cobbles; many thick lime coatings on rock fragments and pendants on their underside; violently effervescent; common filaments and seams of lime on faces of peds; strongly alkaline (pH 8.6); gradual irregular boundary. (4 to 11 inches thick)

Bk2—23 to 53 inches; white (10YR 8/2) very gravelly silt loam, very pale brown (10YR 7/3) moist; moderate medium subangular blocky structure; 15 percent pockets of loose material; hard, friable, sticky and slightly plastic; common very fine roots; common very fine tubular pores; 35 percent pebbles, 10 percent cobbles, and 5 percent stones; many thick lime coatings on rock fragments and many pendants on their underside; violently effervescent; strongly alkaline (pH 8.6); clear irregular boundary. (9 to 34 inches thick)

Bk3—53 to 60 inches; very pale brown (10YR 8/3) very gravelly loam, very pale brown (10YR 7/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 45 percent pebbles; many moderately thick lime coatings on pebbles and many pendants on their underside; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 2 miles southwest of Little Antelope Summit; about 650 feet south and 100 feet east of the northwest corner of

sec. 4, T. 17 N., R. 58 E.; north latitude of 39 degrees, 22 minutes, 32 seconds; west longitude of 115 degrees, 27 minutes, 30 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from midsummer through midfall, moist from late fall through early summer

Soil temperature: 42 to 47 degrees F

Mollic epipedon: 10 to 15 inches thick; includes part or all of the argillic horizon

Depth to the base of an argillic horizon: 15 to 20 inches

Depth to secondary carbonates: 10 to 20 inches

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Reaction—mildly alkaline or moderately alkaline

Effervescence—noneffervescent or slightly effervescent in some pedons

Bt horizon:

Value—4 to 6 dry

Chroma—2 or 3

Texture—very cobbly silty clay loam or very cobbly clay loam

Clay content—27 to 35 percent

Content of rock fragments—20 to 35 percent pebbles and 15 to 25 percent cobbles

Effervescence—noneffervescent to violently effervescent

Bk horizon:

Value—6 to 8 dry, 5 to 7 moist

Chroma—2 to 4

Texture—very gravelly silt loam or very gravelly loam

Reaction—moderately alkaline or strongly alkaline

Armespan Series

The Armespan series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on fan piedmont remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 53 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Durixerollic Calciorthids

Typical pedon: Armespan very gravelly sandy loam, in map unit 1830; in an area where pebbles cover about 25 percent of the surface:

A1—0 to 1 inch; very pale brown (10YR 7/3) very gravelly sandy loam, brown (10YR 4/3) moist; moderate medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; common fine vesicular

pores; 40 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary. (0 to 2 inches thick)

A2—1 to 4 inches; very pale brown (10YR 7/3) gravelly sandy loam, brown (10YR 4/3) moist; weak medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common very fine and fine vesicular pores; 30 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary. (2 to 8 inches thick)

Bk—4 to 10 inches; very pale brown (10YR 7/3) gravelly sandy loam, brown (10YR 5/3) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine to medium roots; common fine tubular pores; 30 percent pebbles; thin lime films on the underside of pebbles; soft powdery lime throughout the horizon; violently effervescent; moderately alkaline (pH 8.0); clear wavy boundary. (5 to 16 inches thick)

Bqk—10 to 36 inches; very pale brown (10YR 8/3) very gravelly sandy loam, pale brown (10YR 6/3) moist; massive; hard, firm, nonsticky and nonplastic; common fine and medium roots in soft pockets; few fine interstitial and tubular pores; 50 percent pebbles; few pockets of extremely gravelly loamy coarse sand as much as 4 inches across; 20 percent discontinuous, laminar-capped, very hard silica laminae $\frac{1}{8}$ inch to 2 inches thick; common thin or moderately thick lime and silica pendants on the underside of pebbles; violently effervescent; moderately alkaline (pH 8.0); abrupt irregular boundary. (10 to 26 inches thick)

C—36 to 60 inches; pale brown (10YR 6/3) very gravelly loamy coarse sand, brown (10YR 4/3) moist; massive; hard, friable, nonsticky and nonplastic; very few fine roots; few fine interstitial and tubular pores; 55 percent pebbles; few thin layers of very hard silica-lime material; pebbles partly coated with lime; common thin lime pendants on the underside of pebbles; strongly effervescent; moderately alkaline (pH 8.0).

Type location: White Pine County, Nevada; about 6 miles southeast of the Bull Creek Ranch; 1,500 feet south and 150 feet west of the northeast corner of sec. 10, T. 13 N., R. 67 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from summer through fall, except for 10 to 20 cumulative days between July and October because of convection storms

Soil temperature: 53 to 59 degrees F

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Effervescence: Strongly effervescent or violently effervescent throughout the profile

Depth to the Bk horizon: 4 to 10 inches

Thickness of the calcic horizon: 15 to 35 inches

Control section:

Clay content—10 to 18 percent

Content of rock fragments—average of 35 to 50 percent

A horizon:

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 or 3

Bw horizon (if it occurs):

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3

Texture of the fine-earth fraction—sandy loam or loam

Content of rock fragments—15 to 35 percent, dominantly pebbles

Bk horizon:

Value—6 to 8 dry, 5 to 7 moist

Chroma—2 or 3 dry or moist

Texture of the fine-earth fraction—sandy loam or loam

Clay content—12 to 18 percent

Content of rock fragments—15 to 35 percent, dominantly pebbles

Structure—massive, weak platy, or subangular blocky
Carbonates—soft powdery lime throughout the horizon

Calcium carbonate equivalent—10 to 35 percent

Bkq horizon:

Value—7 or 8 dry, 6 or 7 moist

Chroma—2 or 3 dry or moist

Texture of the fine-earth fraction—sandy loam or coarse sandy loam

Clay content—10 to 18 percent

Content of rock fragments—35 to 50 percent, predominantly pebbles

Calcium carbonate equivalent—10 to 35 percent in the fraction less than 20 mm in size

Other features—20 to 50 percent weak or strong, discontinuous silica-lime cementation as plates and pendants under rock fragments

C horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Texture of the fine-earth fraction—loamy sand or loamy coarse sand

Clay content—5 to 10 percent

Content of rock fragments—35 to 65 percent, predominantly pebbles

Carbonates—lime pendants on the underside of rock fragments

Atlow Series

The Atlow series consists of shallow, well drained soils that formed in residuum derived from andesite. These soils are on the side slopes of mountains and hills. Slopes are 4 to 50 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids

Typical pedon: Atlow very gravelly loam, in map unit 271; in an area where pebbles cover about 50 percent of the surface, cobbles cover 20 percent, and stones cover 10 percent:

- A—0 to 2 inches; light brownish gray (10YR 6/2) very gravelly loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common fine interstitial pores; 40 percent pebbles, 5 percent cobbles, and 5 percent stones; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 9 inches thick)
- Bt1—2 to 8 inches; grayish brown (10YR 5/2) very gravelly sandy clay loam, dark grayish brown (10YR 4/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine and few medium roots; common fine tubular pores; 30 percent pebbles and 5 percent cobbles; few thin clay films bridging sand grains; few thin lime coatings on the underside of rock fragments; moderately alkaline (pH 8.2); clear smooth boundary. (4 to 6 inches thick)
- Bt2—8 to 16 inches; light brownish gray (10YR 6/2) very gravelly sandy clay loam, dark grayish brown (10YR 4/2) moist; moderate fine subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine and few medium roots; common fine tubular pores; 45 percent pebbles and 5 percent cobbles; few thin clay films bridging sand grains; common thin lime coatings on the underside of rock fragments; moderately alkaline (pH 8.2); abrupt smooth boundary. (4 to 8 inches thick)
- R—16 inches; volcanic flow rock with discontinuous silica and lime coatings on the upper surface and in fractures.

Type location: White Pine County, Nevada; about 15 miles southwest of the Paris Ranch; about 2,200 feet west and 2,000 feet south of the northeast corner of sec. 25, T. 24 N., R. 60 E.; north latitude of 39

degrees, 55 minutes, 40 seconds; west longitude of 115 degrees, 9 minutes, 35 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from midfall through spring, dry from summer through early fall

Soil temperature: 48 to 52 degrees F

Thickness of the solum: 14 to 20 inches

Depth to bedrock: 14 to 20 inches

A horizon:

Value—6 or 7 dry, 3 to 5 moist

Chroma—2 or 3

Reaction—mildly alkaline or moderately alkaline

Bt horizon:

Value—5 to 7 dry, 4 or 5 moist

Chroma—2 to 4

Texture—very gravelly clay loam, very cobbly clay loam, or very gravelly sandy clay loam

Clay content—27 to 35 percent

Content of rock fragments—35 to 50 percent, dominantly pebbles and cobbles

Structure—angular or subangular blocky

Reaction—moderately alkaline or strongly alkaline

Carbonates—noncalcareous matrix, but thin lime coatings on the underside of rock fragments

Consistence—slightly hard or hard, slightly sticky or sticky, slightly plastic or plastic

Automal Series

The Automal series consists of very deep, well drained soils that formed in alluvium derived from limestone. These soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Durixerollic Calciorthids

Typical pedon: Automal gravelly silt loam, in map unit 372; in an area where pebbles cover about 35 percent of the surface:

- A1—0 to 5 inches; pale brown (10YR 6/3) gravelly silt loam, brown (10YR 4/3) moist; moderate thick platy structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common very fine and fine tubular and common fine vesicular pores; 15 percent pebbles; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (1 to 5 inches thick)
- A2—5 to 12 inches; very pale brown (10YR 7/4) gravelly

silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; many very fine and common fine and medium roots; common very fine tubular pores; few thin lime coatings on the underside of pebbles; 15 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (1 to 7 inches thick)

Bk—12 to 19 inches; light yellowish brown (10YR 6/4) very gravelly silt loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and slightly plastic; common very fine to coarse roots; common very fine and fine tubular and common fine interstitial pores; common thin lime coatings on the underside of pebbles; few lime- and silica-cemented concretions; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (2 to 9 inches thick)

2Bqk1—19 to 32 inches; pale brown (10YR 6/3) extremely gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, nonsticky and nonplastic; common very fine and fine roots; many very fine and fine interstitial pores; many thick lime and silica pendants on the underside of pebbles; 55 percent pebbles and 10 percent cobbles; violently effervescent; weak continuous lime and silica cementation; moderately alkaline (pH 8.4); clear smooth boundary. (6 to 30 inches thick)

2Bqk2—32 to 60 inches; light brownish gray (10YR 6/2) extremely gravelly coarse sandy loam, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine to medium roots; many very fine and fine interstitial pores; discontinuous weak or strong lime and silica cementation; many thick lime and silica pendants on the underside of pebbles and cobbles; 60 percent pebbles and 10 percent cobbles; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 2 miles southwest of the Preston Seeding windmill; about 800 feet west and 10 feet south of the northeast corner of sec. 31, T. 14 N., R. 62 E.; north latitude of 39 degrees, 2 minutes, 30 seconds; west longitude of 115 degrees, 2 minutes, 30 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from June through October

Soil temperature: 47 to 52 degrees F

Depth to a calcic horizon: 5 to 12 inches

Depth to continuous weak silica and lime cementation: 5 to 20 inches

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Control section:

Clay content—3 to 20 percent

Content of rock fragments—50 to 80 percent (40 to 60 percent pebbles and 10 to 20 percent cobbles and stones)

Texture—very gravelly sandy loam, extremely gravelly sandy loam, or very gravelly silt loam; in some pedons, extremely gravelly coarse sandy loam in the lower part

A horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Bk horizon:

Chroma—3 or 4

Consistence—very friable or friable

Other features—in some pedons, few lime- and silica-cemented concretions

Bqk horizon:

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 to 4

Consistence—dominantly hard or very hard, firm or very firm; slightly hard or friable in the lower part in some pedons

Barfan Series

The Barfan series consists of shallow, well drained soils that formed in residuum derived from ash flow tuff having some calcareous loess. These soils are on low hills and on the summits of fan piedmont remnants that have a rock core. Slopes are 2 to 8 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Ashy, calcareous, mesic Lithic Xeric Torriorthents

Typical pedon: Barfan gravelly sandy loam, in map unit 1300; in an area where pebbles cover about 40 percent of the surface:

A—0 to 2 inches; light gray (10YR 7/1) gravelly sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and few fine roots; common vesicular and few very fine irregular pores; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (1 to 4 inches thick)

AC—2 to 11 inches; light gray (10YR 7/2) sandy loam, brown (10YR 5/3) moist; weak medium subangular

blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, common fine, and few medium roots; few very fine irregular pores; 5 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary. (5 to 12 inches thick)

R—11 inches; fractured bedrock consisting of flagstones with many moderately thick lime and silica pendants coating fractures.

Type location: White Pine County, Nevada; about 6 miles southwest of Blackjack; about 1,800 feet west and 600 feet south of northeast corner of sec. 13, T. 12 N., R. 60 E.; north latitude of 38 degrees, 53 minutes, 4 seconds; west longitude of 115 degrees, 10 minutes, 50 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and early spring, dry from late spring through early fall

Soil temperature: 47 to 52 degrees F

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Depth to lithic contact: 7 to 14 inches

Control section:

Clay content—5 to 15 percent

Content of rock fragments—0 to 20 percent, dominantly 2 to 5 mm in size

Texture—average of sandy loam or gravelly sandy loam

A horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—1 to 3

AC horizon:

Value—6 to 8 dry, 5 or 6 moist

Chroma—2 or 3

Belmill Series

The Belmill series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on fan piedmont remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 11 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Aridic Calcic Argixerolls

Typical pedon: Belmill gravelly loam, in map unit 360; in an area where pebbles cover about 5 percent of the surface:

A—0 to 3 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak and

moderate very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine interstitial pores; 25 percent pebbles; neutral (pH 6.8); abrupt smooth boundary. (1 to 3 inches thick)

Bt1—3 to 6 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine and fine roots; many very fine and fine interstitial pores; common thin clay films on faces of peds and bridging sand grains; 25 percent pebbles; neutral (pH 6.8); clear smooth boundary. (2 to 7 inches thick)

Bt2—6 to 13 inches; brown (10YR 5/3) gravelly loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; many very fine and fine roots; many very fine tubular pores; many thin clay films as bridges and few thin clay films on faces of peds; 30 percent pebbles; neutral (pH 6.8); abrupt smooth boundary. (4 to 8 inches thick)

2Bt3—13 to 19 inches; pale brown (10YR 6/3) extremely gravelly sandy loam, brown (10YR 4/3) moist; massive; very hard, friable, sticky and plastic; common very fine and fine roots; many very fine and fine interstitial pores; common thin clay films as bridges; 60 percent pebbles; neutral (pH 7.0); abrupt smooth boundary. (4 to 8 inches thick)

2Bqk1—19 to 30 inches; pale brown (10YR 6/3) extremely gravelly sandy loam, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; common fine and medium interstitial pores; many fine white (10YR 8/1) lime and silica coatings on all surfaces of pebbles; 75 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (8 to 14 inches thick)

3Bqk2—30 to 60 inches; pale brown (10YR 6/3) extremely gravelly loamy sand, brown (10YR 4/3) moist; single grained; loose, nonsticky and nonplastic; few very fine and fine roots and many fine roots in spots; common fine and medium interstitial pores; common fine white (10YR 8/1) lime and silica coatings on all surfaces of pebbles; 75 percent pebbles; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; about 3 miles west of Belmill Mine, Mount Hamilton; about 500 feet south and 200 feet west of the northeast corner of sec. 13, T. 16 N., R. 56 E.; north latitude of 39 degrees, 15 minutes, 35 seconds; west longitude of 115 degrees, 36 minutes, 34 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is

above 41 degrees F; dry from late June through October, moist from winter through early spring

Soil temperature: 47 to 50 degrees F

Mollic epipedon: Characteristics of a mollic epipedon if the surface layer is mixed to a depth of 7 inches

Depth to a calcic horizon: 11 to 20 inches

Control section:

Clay content—average of 18 to 27 percent

Content of rock fragments—average of 35 to 50 percent

Texture—when mixed, average of very gravelly loam, very gravelly sandy loam, or very gravelly sandy clay loam

A horizon:

Value—5 or 6 dry, 2 or 3 moist

Chroma—2 or 3

Bt horizon:

Value—4 to 6 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist

Texture—dominantly gravelly loam, but subhorizons of gravelly sandy loam or gravelly sandy clay loam in some pedons

Content of rock fragments—15 to 30 percent, mostly pebbles

Structure—weak or moderate, fine or medium subangular blocky

Reaction—neutral or mildly alkaline

2Bt horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—extremely gravelly loam, extremely gravelly sandy loam, or extremely gravelly sandy clay loam

Content of rock fragments—60 to 75 percent

Structure—weak fine or medium subangular blocky or massive

Reaction—neutral or mildly alkaline

2Bqk horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—extremely gravelly sandy loam or extremely gravelly loam

Clay content—15 to 20 percent

Content of rock fragments—60 to 75 percent

Reaction—neutral to moderately alkaline

3Bqk horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—3 or 4 moist

Clay content—5 to 10 percent

Content of rock fragments—60 to 75 percent

Biken Series

The Biken series consists of shallow, well drained soils that formed in mixed alluvium over weathered tuff and tuffaceous sandstone. These soils are on hills and fan piedmont remnants that have a rock core. Slopes are 2 to 30 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic, shallow Xerollic Calciorthids

Typical pedon: Biken very gravelly fine sandy loam, in map unit 1240; in an area where pebbles cover about 20 percent of the surface:

A—0 to 3 inches; light brownish gray (10YR 6/2) very gravelly fine sandy loam, dark brown (10YR 4/3) moist; weak thin platy structure; soft, very friable, nonsticky and slightly plastic; few very fine roots; common very fine interstitial pores; 40 percent pebbles; calcium carbonate equivalent of 17 percent; slightly effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (2 to 5 inches thick)

Bkq1—3 to 9 inches; pale brown (10YR 6/3) very gravelly fine sandy loam, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and common fine roots; common very fine and fine tubular pores; many thick lime and silica pendants on the underside of pebbles; 45 percent pebbles and 5 percent cobbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (4 to 9 inches thick)

Bkq2—9 to 18 inches; light gray (10YR 7/2) very gravelly fine sandy loam, light brownish gray (10YR 6/2) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few medium and coarse roots; common very fine tubular pores; many thin lime and silica pendants on the underside of pebbles; 40 percent pebbles and 10 percent cobbles; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary. (6 to 11 inches thick)

Cr—18 to 30 inches; light brownish gray (10YR 6/2), partially decomposed, tuffaceous sandstone, dark grayish brown (10YR 4/2) moist; massive; hard, firm; slightly effervescent; clear wavy boundary. (6 to 18 inches thick)

R—30 inches; light brownish gray (10YR 6/2), compact, tuffaceous bedrock.

Type location: White Pine County, Nevada; about 35 miles southwest of Ely; about 2,000 feet north and

300 feet west of the southeast corner of sec. 2, T. 14 N., R. 61 E.; north latitude of 39 degrees, 6 minutes, 20 seconds; west longitude of 115 degrees, 4 minutes, 45 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from mid-June through October

Soil temperature: 47 to 52 degrees F

Depth to a calcic horizon: 2 to 5 inches

Depth to paralithic material: 14 to 20 inches

Depth to hard bedrock: 20 to 35 inches

Other features: In some pedons, discontinuous, thin laminae of lime- and silica-cemented soil material

A horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Bkq horizon:

Value—5 to 7 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Texture—very gravelly fine sandy loam, very gravelly sandy loam, or very gravelly loam

Clay content—8 to 18 percent

Content of rock fragments—35 to 60 percent

Consistence—soft or slightly hard, very friable or friable

Reaction—moderately alkaline or strongly alkaline

Birchcreek Series

The Birchcreek series consists of moderately deep, well drained soils that formed in alluvium and colluvium derived from andesite and conglomerate. These soils are on the side slopes of mountains. Slopes are 4 to 50 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 42 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls

Typical pedon: Birchcreek very cobbly loam, in map unit 1451; in an area where pebbles cover about 20 percent of the surface, cobbles cover 15 percent, and stones cover 2 percent:

A—0 to 3 inches; grayish brown (10YR 5/2) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate thick platy structure parting to moderate medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine and fine vesicular and

common very fine tubular pores; 20 percent pebbles, 15 percent cobbles, and 2 percent stones; neutral (pH 7.0); abrupt smooth boundary. (3 to 10 inches thick)

Bt1—3 to 5 inches; grayish brown (10YR 5/2) very cobbly clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and few fine roots; common very fine tubular pores; 30 percent pebbles, 20 percent cobbles, and 5 percent stones; neutral (pH 7.2) clear wavy boundary. (3 to 8 inches thick)

Bt2—5 to 10 inches; dark grayish brown (10YR 4/2) very cobbly clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, friable, very sticky and very plastic; common very fine and few fine and medium roots; common very fine tubular pores; 30 percent pebbles, 15 percent cobbles, and 10 percent stones; neutral (pH 7.2); clear wavy boundary. (3 to 13 inches thick)

Bt3—10 to 16 inches; dark grayish brown (10YR 4/2) very cobbly clay, very dark grayish brown (10YR 3/2) moist; weak fine and medium prismatic structure parting to moderate medium angular blocky; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; few pressure faces; common very thin very dark grayish brown (10YR 3/2) organic coatings; 30 percent pebbles, 15 percent cobbles, and 10 percent stones; neutral (pH 7.2); clear wavy boundary. (0 to 16 inches thick)

Bt4—16 to 28 inches; yellowish brown (10YR 5/4) very cobbly clay, dark yellowish brown (10YR 3/4) moist; weak fine and medium prismatic structure parting to moderate medium angular blocky; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; few organic coatings; 20 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral (pH 7.2); abrupt irregular boundary. (0 to 12 inches thick)

2R—28 inches; slightly fractured andesite bedrock.

Type location: White Pine County, Nevada; about 15 miles southwest of Ely, near Jakes Wash; about 400 feet south and 2,400 feet east of the northwest corner of sec. 14, T. 18 N., R. 61 E.; north latitude of 39 degrees, 25 minutes, 56 seconds; west longitude of 115 degrees, 4 minutes, 34 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from summer through fall, moist from late fall through early summer

Soil temperature: 43 to 46 degrees F

Mollic epipedon: 10 to 18 inches thick

Reaction: Neutral or mildly alkaline

Depth to bedrock: 20 to 40 inches

Control section:

Clay content—average of 40 to 50 percent
 Content of rock fragments—45 to 60 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist
 Chroma—2 or 3

Bt horizon:

Value—4 or 5 dry, 2 or 3 moist
 Chroma—dominantly 2 or 3, but in some pedons chroma of 2 to 6 in the lower part
 Texture—very cobbly clay loam, very cobbly clay, extremely cobbly clay, very stony clay loam, very stony clay, or extremely stony clay
 Content of rock fragments more than 3 inches in diameter—25 to 40 percent
 Content of pebbles—15 to 35 percent
 Structure—dominantly subangular blocky, but prismatic parting to angular blocky in subhorizons of some pedons
 Consistence—slightly hard or hard, very friable to firm
 Other features—in the lower subhorizons in some pedons, few pressure faces and organic stains on faces of peds

Blimo Series

The Blimo series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on inset fans, fan skirts, beach plains, and alluvial flats. Slopes are 0 to 8 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Durorthidic Xeric Torriorthents

Typical pedon: Blimo gravelly loam, in map unit 603; in an area where pebbles cover about 20 percent of the surface:

- A—0 to 3 inches; grayish brown (10YR 5/2) gravelly loam, dark grayish brown (10YR 4/2) moist; moderate and strong medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; common fine vesicular and tubular pores; 15 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (1 to 5 inches thick)
- Bk—3 to 8 inches; pale brown (10YR 6/3) gravelly sandy loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; common fine tubular pores; 15 percent pebbles; strongly

effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (2 to 6 inches thick)

Bqk1—8 to 21 inches; pale brown (10YR 6/3) gravelly sandy loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; common fine tubular pores; 50 percent weak discontinuous silica cementation; 20 to 30 percent discontinuous durinodes $\frac{1}{4}$ to $\frac{1}{2}$ inch in diameter; few filaments and soft masses of lime; 15 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (7 to 15 inches thick)

Bqk2—21 to 36 inches; pale brown (10YR 6/3), continuously weakly silica cemented gravelly sandy loam, brown (10YR 4/3) moist; massive; hard, firm, nonsticky and nonplastic; common very fine and fine and few medium roots; common fine tubular pores; few fine, soft masses of lime; 25 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary. (10 to 20 inches thick)

Bqk3—36 to 60 inches; pale brown (10YR 6/3), continuously weakly silica cemented, sandy loam, brown (10YR 4/3) moist; massive; very hard, firm, nonsticky and nonplastic; few very fine and fine roots; common fine tubular pores; common fine and medium soft masses or filaments of lime and gypsum; 10 percent pebbles; violently effervescent; strongly alkaline (pH 8.6)

Type location: White Pine County, Nevada; in Butte Valley; about 2,000 feet west and 175 feet south of the projected northeast corner of sec. 30, T. 20 N., R. 62 E.; north latitude of 39 degrees, 34 minutes, 47 seconds; west longitude of 115 degrees, 2 minutes, 10 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through early spring, dry from midspring through midfall

Soil temperature: 47 to 52 degrees F

Calcium carbonate equivalent: 5 to 15 percent, by weight, in the fraction less than 20 millimeters in size, increasing with increasing depth

Depth to continuous weak silica cementation: 10 to 25 inches

Reaction: Mildly alkaline to strongly alkaline, increasing with increasing depth

Cementation: In subhorizons that are not continuously silica cemented, 20 to 60 percent durinodes or 20 to 50 percent discontinuous weak silica cementation

Control section:

Clay content—12 to 18 percent

Content of rock fragments—average of 15 to 35 percent

Bobs Series

The Bobs series consists of well drained soils that are shallow over a petrocalcic horizon. These soils formed in alluvium derived from limestone and in some loess high in content of ash. They are on fan piedmont remnants. Slopes are 2 to 30 percent. The mean annual precipitation is about 12 inches, and the mean annual air temperature is about 44 degrees F.

Taxonomic class: Loamy, carbonatic, frigid, shallow
Aridic Petrocalcic Palexerolls

Typical pedon: Bobs very gravelly loam, in map unit 323; in an area where pebbles cover about 30 percent of the surface:

A1—0 to 3 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; few fine roots; common very fine vesicular pores; 35 percent pebbles; slightly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary. (1 to 7 inches thick)

A2—3 to 14 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine to medium roots; common very fine and fine tubular pores; 25 percent pebbles and 5 percent cobbles; strongly effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (5 to 13 inches thick)

Bkm—14 inches; white (10YR 8/2), indurated petrocalcic material, very pale brown (10YR 7/3) moist.

Type location: White Pine County, Nevada; in Steptoe Valley; 1,275 feet north and 350 feet west of the southeast corner of sec. 18, T. 12 N., R. 64 E.; north latitude of 38 degrees, 53 minutes, 52 seconds; west longitude of 114 degrees, 49 minutes, 4 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 44 to 47 degrees F

Mollic epipedon: 7 to 14 inches thick

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Depth to a petrocalcic horizon: 10 to 20 inches

Control section:

Clay content—10 to 20 percent

Content of rock fragments—15 to 35 percent, mainly pebbles, some of which are pan fragments

A horizon:

Value—4 or 5 dry, 2 to 4 moist

Chroma—1 to 3

Bk horizon (if it occurs):

Hue—10YR or 7.5YR

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 to 4

Structure—angular or subangular blocky

Other features—lime coatings on rock fragments

Bkm horizon:

Value—7.5YR or 10YR

Value—6 to 8 dry, 5 to 7 moist

Chroma—1 to 4

Boofuss Series

The Boofuss series consists of very deep, poorly drained soils that formed in mixed alluvium and lacustrine sediments. These soils are on alluvial flats and lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Clayey over loamy, montmorillonitic (calcareous), mesic Typic Halaquepts

Typical pedon: Boofuss silty clay, in map unit 1270:

A—0 to 5 inches; light gray (10YR 7/2) silty clay, light gray (10YR 7/1) moist; moderate fine subangular blocky structure; slightly hard, friable, very sticky and very plastic; few very fine and fine roots; common fine tubular pores; strongly effervescent; very strongly alkaline (pH 9.2); abrupt smooth boundary. (4 to 7 inches thick)

Bk1—5 to 10 inches; light gray (10YR 7/2) silty clay, light gray (10YR 7/1) moist; moderate medium prismatic structure parting to moderate very fine angular blocky; slightly hard, friable, very sticky and very plastic; many very fine roots; many fine tubular pores; strongly effervescent; very strongly alkaline (pH 9.0); clear smooth boundary. (4 to 12 inches thick)

Bk2—10 to 20 inches; light gray (10YR 7/2) silty clay, light gray (10YR 7/1) moist; few fine faint brown (10YR 5/3) mottles; moderate medium prismatic structure parting to moderate fine angular blocky; hard, firm, very sticky and very plastic; common fine and medium roots; common fine and medium tubular pores; strongly effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (7 to 20 inches thick)

2Ckq1—20 to 37 inches; light gray (2.5Y 7/2) fine sandy loam, light brownish gray (2.5Y 6/2) moist; many fine

and medium distinct olive brown (2.5Y 4/4) mottles; moderate coarse prismatic structure parting to moderate fine angular blocky; slightly hard, friable, slightly sticky and slightly plastic; few medium roots; few fine and medium tubular and interstitial pores; common fine rounded silica nodules; few fine and medium, soft, segregated lime pockets; few thin, soft lime coatings in root channels; strongly effervescent; strongly alkaline (pH 8.6); gradual smooth boundary. (10 to 25 inches thick)

2Ckq2—37 to 60 inches; light gray (2/5Y 7/2) fine sandy loam, light brownish gray (2.5Y 6/2) moist; many fine and medium distinct olive brown (2.5Y 4/4) mottles; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few medium roots; few fine tubular and interstitial pores; common fine and medium round silica nodules; common fine, soft segregated lime pockets; strongly effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; in Steptoe Valley; about 425 feet west and 200 feet south of the northeast corner of sec. 1, T. 23 N., R. 63 E.; north latitude of 39 degrees, 54 minutes, 2 seconds; west longitude of 114 degrees, 48 minutes, 10 seconds

Range in Characteristics

Soil moisture: Dry in the A and B horizons from midsummer to early fall; moist in the 2C horizon throughout the year. In most years, saturated at a depth of 1.0 to 2.5 feet from January through June

Soil temperature: 47 to 52 degrees F

Salinity: More than 16 millimhos per cubic centimeter, decreasing with increasing depth

Depth to a contrasting layer: 15 to 35 inches

Control section:

Clay content—35 to 50 percent in the upper part and 8 to 15 percent in the lower part

A horizon:

Hue—10YR, 2.5Y, or 5Y

Value—7 or 8 dry, 6 or 7 moist

Chroma—1 or 2

Reaction—strongly alkaline or very strongly alkaline

Sodium adsorption ratio (SAR)—50 to 80

B horizon:

Hue—10YR, 2.5Y, or 5Y

Value—7 or 8 dry, 6 or 7 moist

Chroma—1 or 2

Texture—stratified silty clay loam, silty clay, or clay

Clay content—35 to 50 percent

Reaction—strongly alkaline or very strongly alkaline

Sodium adsorption ratio (SAR)—50 to 80

2C horizon:

Hue—10YR or 2.5Y

Value—7 or 8 dry, 6 or 7 moist

Texture—stratified fine sandy loam, loam, or silt loam

Clay content—8 to 15 percent

Sodium adsorption ratio (SAR)—10 to 30 percent

Other features—in some pedons, thin strata of coarse sand or sand below a depth of 50 inches

Borvant Series

The Borvant series consists of well drained, moderately permeable soils that are shallow over a petrocalcic horizon. These soils formed in alluvium derived from limestone. They are on fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 13 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic, shallow Aridic Petrocalcic Palexerolls

Typical pedon: Borvant gravelly loam, in map unit 291; in an area where pebbles cover about 40 percent of the surface, cobbles cover 3 percent, and stones cover 1 percent:

A1—0 to 2 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak very fine and fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine interstitial pores; 25 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary. (2 to 4 inches thick)

A2—2 to 11 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine to medium and common coarse roots; common very fine tubular pores; 35 percent pebbles; thin lime coatings on the underside of rock fragments; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary. (2 to 9 inches thick)

Bk—11 to 19 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and plastic; common very fine and fine and few medium and coarse roots; common very fine tubular pores; 55 percent pebbles, 20 percent of which are pan fragments; discontinuous lenses, 1 to 3 inches thick, of weakly lime cemented

pan material; lime pendants, 5 to 20 mm thick, on the underside of rock fragments; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary. (3 to 10 inches thick)

Bkm1—19 to 26 inches; white (10YR 8/2), strongly cemented petrocalcic material, pale brown (10YR 6/3) moist; strong thick and very thick platy structure; very hard, very firm; few fine and medium roots along fractures; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary. (0 to 7 inches thick)

Bkm2—26 to 43 inches; white (10YR 8/2), indurated petrocalcic material, pale brown (10YR 6/3) moist; massive; extremely hard, extremely firm; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 6 miles north of Warm Springs Ranch, in Newark Valley; about 1.8 miles north and 0.2 mile west of the projected northeast corner of sec. 13, T. 23 N., R. 56 E.; north latitude of 39 degrees, 53 minutes, 59 seconds; west longitude of 115 degrees, 36 minutes, 36 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through early summer and dry from midsummer through midfall

Soil temperature: 47 to 54 degrees F

Depth to a hardpan: 10 to 20 inches

Control section:

Clay content—10 to 18 percent

Content of rock fragments—10 to 80 percent in individual horizons; average of 35 to 75 percent

Calcium carbonate equivalent—40 to 60 percent, including rock fragments less than 20 mm in size

A horizon:

Hue—10YR or 7.5YR

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Reaction—mildly alkaline to strongly alkaline

Bk horizon:

Hue—10YR or 7.YR

Value—6 to 8 dry, 4 to 7 moist

Chroma—2 to 4

Texture of the fraction less than 2 mm in size—loam or sandy loam

Reaction—moderately alkaline or strongly alkaline

Bkm horizon:

Hue—10YR or 7.5YR

Value—7 or 8 dry, 6 or 7 moist

Chroma—2 or 3

Breko Series

The Breko series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on fan piedmont remnants. Slopes are 0 to 8 percent. The mean annual precipitation is about 6 inches, and the mean annual air temperature is about 53 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Xerollic Haplargids

Typical pedon: Breko gravelly sandy loam, in map unit 981; in an area where pebbles cover about 50 percent of the surface and cobbles cover 10 percent:

A1—0 to 3 inches; pale brown (10YR 6/3) gravelly sandy loam, brown (10YR 4/3) moist; weak thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; few root crowns; many fine and medium vesicular pores; 20 percent pebbles; moderately alkaline (pH 8.2); abrupt smooth boundary. (2 to 4 inches thick)

A2—3 to 5 inches; yellowish brown (10YR 5/4) gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, firm, sticky and plastic; many fine and medium roots; common fine tubular pores; 15 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 5 inches thick)

Bt1—5 to 9 inches; yellowish brown (10YR 5/4) very gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, firm, sticky and plastic; many fine and medium roots; common fine tubular pores; few thin clay films lining pores; 35 percent pebbles and 5 percent cobbles; moderately alkaline (pH 8.2); slightly effervescent; clear smooth boundary. (4 to 8 inches thick)

Bt2—9 to 26 inches; light yellowish brown (10YR 6/4) extremely gravelly sandy clay loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common fine roots; common fine tubular pores; few thin clay films lining pores; 50 percent pebbles and 15 percent cobbles; few lime films in the lower part and on the lower side of rock fragments; slightly effervescent; moderately alkaline (pH 8.2); gradual wavy boundary. (3 to 17 inches thick)

Bk—26 to 60 inches; pale brown (10YR 6/3) extremely gravelly loamy sand, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; common very fine and fine tubular and interstitial pores; 50 percent pebbles and 15 percent cobbles; lime coatings on the lower side of rock fragments; strongly effervescent; moderately alkaline (pH 8.2).

Type location: White Pine County, Nevada; in White River Valley; about 1.1 miles southwest of Preston; 450 feet east and 700 feet north of the southwest corner of sec. 13, T. 12 N., R. 61 E.; north latitude of 38 degrees, 53 minutes, 44 seconds; west longitude of 115 degrees, 4 minutes, 19 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from summer through fall, except for 10 to 20 cumulative days between July and October because of convection storms

Soil temperature: 55 to 59 degrees F

Control section:

Clay content—25 to 35 percent

Content of rock fragments—average of 35 to 60 percent pebbles and cobbles

A horizon:

Value—5 to 7 dry, 3 to 6 moist

Chroma—2 or 3 dry or moist

Effervescence—noneffervescent or slightly effervescent

Bt horizon:

Hue—10YR, 7.5YR, or 5YR

Value—5 to 7 dry, 3 to 6 moist

Chroma—2 or 4 dry or moist

Texture of the fine-earth fraction—clay loam, loam, or sandy clay loam

Clay content—25 to 35 percent

Content of rock fragments—35 to 80 percent pebbles and cobbles

Structure—strong to weak subangular blocky; massive in the lower part in some pedons

Consistence—slightly hard or hard, friable to firm

Reaction—moderately alkaline or strongly alkaline

Effervescence—slightly effervescent to strongly effervescent

Other features—in some pedons, few thin lime filaments and coatings on the underside of rock fragments

Bk horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 or 4

Texture—stratified gravelly sandy loam to extremely gravelly loamy sand

Clay content—5 to 8 percent

Content of rock fragments—55 to 75 percent

Structure—massive or single grained

Reaction—moderately alkaline or strongly alkaline

Effervescence—strongly effervescent to violently effervescent

Bqk horizon (if it occurs):

Value—7 or 8 dry, 6 or 7 moist

Chroma—1 to 3 dry or moist

Texture of the fine-earth fraction—coarse sandy loam or loamy sand

Content of rock fragments—35 to 75 percent pebbles and cobbles

Reaction—strongly alkaline or very strongly alkaline

Cementation—weak continuous silica cementation or 30 to 50 percent durinodes in a friable matrix

B'k horizon (if it occurs):

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Texture of the fine-earth fraction—sandy loam or coarse sandy loam

Content of rock fragments—15 to 80 percent pebbles and cobbles

Effervescence—strongly effervescent to violently effervescent

Broland Series

The Broland series consists of well drained soils that are shallow to a duripan. These soils formed in mixed alluvium derived from volcanic rock. They are on fan piedmont remnants. Slopes are 2 to 30 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic, shallow Haploxerollic Durargids

Typical pedon: Broland very gravelly loam, in map unit 802; in an area where pebbles cover about 60 percent of the surface and cobbles cover 5 percent:

A—0 to 3 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 3/3) moist; strong thin to thick platy structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine and fine roots; many very fine to coarse vesicular pores; 40 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 5 inches thick)

Bt—3 to 9 inches; pale brown (10YR 6/3) gravelly clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; soft, very friable, sticky and plastic; many very fine to medium roots; many very fine to medium tubular pores; common faint clay films on peds and bridging sand grains; 30 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary. (4 to 10 inches thick)

2Btkq—9 to 16 inches; pale brown (10YR 6/3) extremely gravelly sandy clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky

structure; soft, very friable, sticky and plastic; common very fine to medium roots; common very fine to medium tubular pores; common faint clay films on peds and bridging sand grains; common thin silica and lime coatings on the bottom of rock fragments; 50 percent pebbles and 10 percent cobbles; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (3 to 8 inches thick)

2Bqk—16 to 19 inches; very pale brown (10YR 7/4) extremely gravelly sandy loam, yellowish brown (10YR 5/4) moist; moderate very fine to medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; common very fine to medium roots; common very fine to medium tubular pores; many thick silica and lime coatings on the sides and bottom of pebbles; 55 percent pebbles and 10 percent cobbles; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary. (0 to 5 inches thick)

3Bqkm—19 to 40 inches; white (10YR 8/2), strongly cemented duripan; discontinuous laminar capping; extremely hard, extremely firm, brittle; many thin or moderately thick silica pendants on the underside of rock fragments; clear wavy boundary. (20 to 26 inches thick).

4Ck—40 to 60 inches; very pale brown (10YR 7/4) extremely gravelly coarse sand, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; very few fine roots; common fine interstitial pores; many thick lime coatings on rock fragments; 65 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.2).

Type location: White Pine County, Nevada; about 2,600 feet south and 200 feet west of the northeast corner of sec. 34, T. 20 N., R. 60 E.; north latitude of 39 degrees, 33 minutes, 30 seconds; west longitude of 115 degrees, 11 minutes, 51 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from summer through early fall

Soil temperature: 47 to 52 degrees F

Depth to an indurated duripan: 14 to 20 inches

Control section:

Clay content—average of 22 to 35 percent

Content of rock fragments—average of 35 to 50 percent

Bt horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—3 or 4

Texture—gravelly clay loam or gravelly sandy clay loam

Clay content—27 to 40 percent

2Btkq horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—3 or 4

Texture—extremely gravelly sandy clay loam, extremely gravelly clay loam, or very gravelly clay loam

Content of rock fragments—35 to 70 percent, mainly pebbles

Clay content—20 to 35 percent

2Bqk horizon (if it occurs):

Value—6 or 7 dry, 5 or 6 moist

Chroma—3 or 4

Texture—extremely gravelly sandy loam or very gravelly sandy loam

Clay content—10 to 20 percent

Content of rock fragments—35 to 75 percent, mainly pebbles

4Ck horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 to 4

Clay content—1 to 5 percent

Broyles Series

The Broyles series consists of very deep, well drained soils that formed in a thin loess mantle over mixed loamy alluvium. These soils are on fan skirts and the outer margins of lake plains. Slopes are 0 to 8 percent. The mean annual precipitation is about 7 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Duric Camborthids

Typical pedon: Broyles very fine sandy loam, in map unit 610; in an area where pebbles cover about 40 percent of the surface:

A—0 to 3 inches; light gray (10YR 7/2) very fine sandy loam, brown (10YR 4/3) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; few fine roots; common very fine vesicular pores; 10 percent pebbles; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (3 to 7 inches thick)

Bw—3 to 12 inches; very pale brown (10YR 7/3) fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular

pores; noneffervescent; moderately alkaline (pH 8.2); clear smooth boundary. (6 to 21 inches thick)

2Bqk1—12 to 19 inches; very pale brown (10YR 7/3) fine sandy loam, dark yellowish brown (10YR 4/4) moist; massive; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; 25 to 30 percent durinodes with hard, firm and brittle, discontinuous lime and silica cementation in a friable matrix; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (7 to 26 inches thick)

2Bqk2—19 to 26 inches; very pale brown (10YR 7/3) sandy loam, brown (10YR 5/3) moist; massive; hard, friable, nonsticky and nonplastic; few fine roots; common very fine pores; 25 to 30 percent durinodes with hard, firm and brittle, discontinuous lime and silica cementation in a friable matrix; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (5 to 12 inches thick)

2Bqk3—26 to 60 inches; very pale brown (10YR 7/3) sandy loam, brown (10YR 5/3) moist; massive; hard, friable, nonsticky and nonplastic; few fine roots; common very fine pores; 25 to 30 percent durinodes with hard, firm and brittle, discontinuous lime and silica cementation in a friable matrix; violently effervescent; strongly alkaline (pH 8.8).

Type location: White Pine County, Nevada; about 2.5 miles northwest of Pogues Station, in Little Smoky Valley; about 1,000 feet east and 2,400 feet south of the projected northwest corner of sec. 34, T. 16 N., R. 54 E.; north latitude of 39 degrees, 12 minutes, 56 seconds; west longitude of 115 degrees, 53 minutes, 4 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist for short periods from winter through midspring, dry from late spring through fall

Soil temperature: 47 to 55 degrees F

Depth to a Bk or Bkq horizon: 10 to 24 inches

C horizon: Within a depth of 60 inches in some pedons

Control section:

Clay content—5 to 15 percent

Texture—stratified loam, fine sandy loam, very fine sandy loam, or silt loam in the upper part and loam, fine sandy loam, very fine sandy loam, sandy loam, and loamy sand in the lower part

Content of rock fragments—0 to 35 percent pebbles, the higher percentages commonly in the lower part

A horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3

Reaction—moderately alkaline or strongly alkaline

Carbonates—dominantly noncalcareous, but in some pedons effervescent because of dust recharge

Bw horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Structure—weak fine or medium subangular blocky, platy, or prismatic or massive

Consistence—soft to hard, slightly plastic or plastic

Reaction—moderately alkaline or strongly alkaline

2Bkq horizon:

Reaction—strongly alkaline or very strongly alkaline

Cementation—20 to 75 percent durinodes; in some pedons, very weak silica cementation in the matrix surrounding the durinodes

Other features—in some pedons, few or common fine gypsum in filaments or seams in subhorizons

C horizon (if it occurs):

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—1 to 4

Reaction—strongly alkaline or very strongly alkaline

Bylo Series

The Bylo series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on lake plains and inset fans. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Fine-silty, mixed, mesic Typic Camborthids

Typical pedon: Bylo silt loam, in map unit 793:

A—0 to 4 inches; very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; weak thin platy structure; slightly hard, friable, sticky and plastic; few root crowns; many very fine and fine vesicular pores; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (1 to 4 inches thick)

Bw—4 to 10 inches; pale brown (10YR 6/3) silty clay loam, yellowish brown (10YR 5/4) moist; weak very fine subangular blocky structure; soft, very friable, sticky and plastic; common very fine and fine roots; common very fine and fine tubular and interstitial pores; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (6 to 16 inches thick)

Bk—10 to 34 inches; pale brown (10YR 6/3) silty clay

loam, yellowish brown (10YR 5/4) moist; weak coarse prismatic structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common very fine and fine tubular and interstitial pores; few lime films along old root channels and on faces of peds; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (18 to 35 inches thick)

C—34 to 60 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; massive, soft, very friable, sticky and plastic; few very fine and fine roots; common very fine and fine tubular pores; violently effervescent; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; about 1,600 feet south and 1,320 feet west of the northeast corner of sec. 13, T. 15 N., R. 55 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist for short periods in winter and spring, dry in summer and fall

Soil temperature: 47 to 54 degrees F

Reaction: Moderately alkaline in the upper part of the profile, moderately alkaline or strongly alkaline in the lower part

Effervescence: Noneffervescent to strongly effervescent above the Bk horizon

Control section:

Clay content—18 to 35 percent

Texture—silty clay loam or silt loam

A horizon:

Value—6 or 7 dry, 3 to 5 moist

Chroma—2 to 4

Bw horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Structure—weak thin platy or coarse prismatic, weak very fine to medium subangular blocky, or massive

Bk horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3

Structure—weak thin platy, weak fine to coarse subangular blocky or prismatic, or massive

Carbonates—few to many fine, distinct segregations of lime

Calcium carbonate equivalent—less than 15 percent in the fraction less than 20 mm in size

Other features: In some pedons, lenses of pebbles at a depth of more than 50 inches

Candelaria Series

The Candelaria series consists of very deep, well drained soils that formed in alluvium derived from mixed rocks. These soils are on fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 6 inches, and the mean annual air temperature is about 53 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Duric Calciorthids

Typical pedon: Candelaria very gravelly sandy loam, in map unit 1830; in an area where pebbles cover about 35 percent of the surface:

A1—0 to 1 inch; light gray (10YR 7/2) very gravelly sandy loam, brown (10YR 5/3) moist; weak thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; few very fine vesicular pores; 45 percent pebbles; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary. (0 to 7 inches thick)

A2—1 to 3 inches; very pale brown (10YR 7/4) gravelly fine sandy loam, yellowish brown (10YR 5/4) moist; weak medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; few very fine vesicular pores; 20 percent pebbles; strongly effervescent; strongly alkaline (pH 8.5); abrupt smooth boundary. (0 to 4 inches thick)

Bk—3 to 11 inches; very pale brown (10YR 7/4) very gravelly sandy loam, light yellowish brown (10YR 6/4) moist; moderate coarse prismatic structure parting to moderate medium and fine subangular blocky; hard, friable, slightly sticky and slightly plastic; many very fine to medium roots; common very fine and fine tubular pores; 35 percent pebbles; lime coatings on the lower side of pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (0 to 9 inches thick)

2Bqk—11 to 22 inches; very pale brown (10YR 7/4) very gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm, nonsticky and nonplastic; few very fine and fine roots; few fine tubular pores; 50 percent pebbles and 5 percent cobbles; hard masses of lime- and silica-cemented material making up 20 percent of the soil mass; lime coatings on pebbles; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary. (6 to 20 inches thick)

3Ck—22 to 60 inches; very pale brown (10YR 7/3) extremely gravelly loamy coarse sand, pale brown (10YR 6/3) moist; massive; hard, friable, nonsticky and nonplastic; very few fine roots; 60 percent pebbles; 5 percent cobbles; few thin layers of very hard silica-lime cementation; few nodules of silica- and lime-cemented material as much as 2 inches in

diameter; violently effervescent; strongly alkaline (pH 8.8).

Type location: White Pine County, Nevada; about 2.5 miles south-southwest of Birch Spring; 2,460 feet south and 1,060 feet east of the northwest corner of sec. 34, T. 13 N., R. 57 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in some part for short periods during winter and spring and, because of convection storms, for 10 to 20 cumulative days between July and October

Soil temperature: 53 to 59 degrees F

Depth to a paralithic calcic horizon: 1 to 7 inches

Reaction: Strongly alkaline or very strongly alkaline

Control section:

Clay content—average of 4 to 10 percent

Content of rock fragments—average of 50 to 70 percent, mainly pebbles; in some pedons 40 to 80 percent in some strata

A horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Effervescence—strongly effervescent or violently effervescent

Bk horizon:

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 to 4

Texture of the fraction less than 2 mm in size—loamy sand or sandy loam

Structure—platy or prismatic, parting to subangular blocky in some pedons

Effervescence—strongly effervescent or violently effervescent

Bqk horizon:

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 to 4

Texture of the fraction less than 2 mm in size—loamy sand or sandy loam

Clay content—8 to 15 percent

Content of rock fragments—45 to 65 percent, dominantly pebbles

Calcium carbonate equivalent—10 to 25 percent

Other features—20 to 60 percent weak to strong lime- and silica-cemented plates

3Ck horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 or 4

Texture—sand, loamy sand, or loamy coarse sand

Content of rock fragments—average of 50 to 75

percent, but in some pedons, 40 to 80 percent in some strata, dominantly pebbles

Structure—massive or single grained

Calcium carbonate equivalent—5 to 15 percent

Effervescence—strongly effervescent or violently effervescent

Other features—few thin lime- and silica-cemented plates and nodules in some pedons

4C horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 or 4

Texture—sand, loamy sand, or loamy coarse sand

Content of rock fragments—average of 50 to 70 percent

Calcium carbonate equivalent—less than 5 percent

Effervescence—strongly effervescent or violently effervescent

Cassiro Series

The Cassiro series consists of very deep, well drained soils that formed in material weathered from mixed rocks and, in some areas, colluvium derived from quartzite and conglomerate. These soils are on fan piedmont remnants and the side slopes of hills. Slopes are 2 to 30 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Aridic Argixerolls

Typical pedon: Cassiro stony loam, in map unit 411; in an area where pebbles cover about 10 percent of the surface, cobbles 10 cover percent, and stones 10 cover percent:

A—0 to 5 inches; dark brown (10YR 3/3) stony loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; few fine vesicular pores; 10 percent pebbles, 10 percent cobbles, and 10 percent stones; neutral (pH 7.3); gradual wavy boundary. (2 to 6 inches thick)

Bt1—5 to 11 inches; brown (10YR 4/3) very gravelly clay loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, firm, sticky and plastic; few very fine and medium roots; few fine tubular pores; 30 percent pebbles, 10 percent cobbles, and 5 percent stones; neutral (pH 7.3); abrupt wavy boundary. (3 to 8 inches thick)

Bt2—11 to 38 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, firm, very sticky and very plastic; few medium roots; few

fine tubular pores; thick clay films on faces of peds; 45 percent pebbles and 10 percent cobbles; neutral (pH 7.3); gradual wavy boundary. (8 to 27 inches thick)

Bt3—38 to 60 inches; brown (7.5YR 5/4) very gravelly clay, dark brown (7.5YR 4/4) moist; moderate fine subangular blocky structure; hard, firm, very sticky and very plastic; few fine and medium roots; few fine tubular pores; thin lime coatings on the underside of rock fragments; thick clay films on faces of peds and lining pores; 45 percent pebbles and 10 percent cobbles; neutral (pH 7.3).

Type location: White Pine County, Nevada; about 1/4 mile east of Strawberry Ranch; about 300 feet south and 1,100 feet east of the northwest corner of sec. 16, T. 21 N., R. 55 E.; north latitude of 41 degrees, 50 minutes, 00 seconds; west longitude of 115 degrees, 47 minutes, 30 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through spring, dry from summer through midfall

Soil temperature: 47 to 52 degrees F

Mollic epipedon: 10 to 16 inches thick

Depth to stratified tuff, silt, and ash: 40 to more than 60 inches

Control section:

Clay content—35 to 50 percent

Content of rock fragments—40 to 60 percent, dominantly pebbles, but as much as 10 percent cobbles and stones

Texture—sandy clay, clay, or clay loam

A horizon:

Hue—7.5YR or 10YR

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 or 3

Reaction—medium acid to mildly alkaline

Bt horizon:

Hue—7.5YR or 10YR

Value—4 or 5 dry, 3 or 4 moist

Chroma—2 to 4

Reaction—medium acid to mildly alkaline

Other features: In some pedons, no paralithic contact within a depth of 60 inches

Cavehill Series

The Cavehill series consists of moderately deep, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on the side slopes of mountains and hills. Slopes are 15 to 75

percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, frigid Typic Calcixerolls

Typical pedon: Cavehill very gravelly silt loam, in map unit 100; in an area where pebbles cover about 60 percent of the surface, cobbles cover 20 percent, and stones cover 1 percent:

Oi—1 inch to 0; undecomposed needles and twigs; abrupt smooth boundary.

A1—0 to 2 inches; brown (10YR 5/3) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; few very fine interstitial pores; 35 percent pebbles; moderately alkaline (pH 7.9); abrupt smooth boundary. (1 to 7 inches thick)

A2—2 to 8 inches; brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; common very fine and few fine tubular pores; many thin lime coatings on the underside of rock fragments; 35 percent pebbles; violently effervescent; moderately alkaline (pH 7.9); clear smooth boundary. (5 to 13 inches thick)

A3—8 to 15 inches; brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine interstitial pores; many thin lime coatings on the underside of rock fragments; 50 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.0); clear wavy boundary. (0 to 12 inches thick)

Bk—15 to 27 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine interstitial pores; 5 to 10 percent weak discontinuous lime cementation; many moderately thick lime pendants on the underside of rock fragments; 45 percent pebbles and 10 percent cobbles; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (6 to 18 inches thick)

2R—27 inches; hard, unweathered limestone; slightly

effervescent

Type location: White Pine County, Nevada; about 2 miles south of Little Bald Mountain; about 1,600 feet east and 400 feet south of the northwest corner of sec. 3, T. 23 N., R. 57 E.; north latitude of 39 degrees, 54 minutes, 10 seconds; west longitude of 115 degrees, 32 minutes, 43 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; dry from midsummer through midfall, moist from midfall through midsummer

Soil temperature: 43 to 47 degrees F

Mollic epipedon: 14 to 20 inches thick

Depth to bedrock: 20 to 40 inches

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Control section:

Clay content—18 to 27 percent

Content of rock fragments—35 to 60 percent, mainly pebbles and cobbles, but also stones in some pedons

Texture—very gravelly silt loam, very gravelly loam, very cobbly loam, or very cobbly silt loam

Calcium carbonate equivalent—average of 40 to 60 percent, the upper part ranging from 15 to 50 percent, the lower part ranging from 50 to 80 percent

A horizon:

Value—4 or 5 dry

Chroma—2 or 3

Effervescence—after mixing to a depth of 7 inches, effervescent above a depth of 10 inches and strongly effervescent or violently effervescent below a depth of 10 inches

Other features—thick lime pendants on some rock fragments in the lower A horizon in some pedons

Bk horizon:

Value—6 to 8 dry, 4 to 7 moist

Chroma—2 or 3

Content of rock fragments—average of 35 to 60 percent

Structure—subangular blocky or massive

Other features—weak discontinuous lime cementation and thin to thick lime pendants on the underside of rock fragments

Chen Series

The Chen series consists of shallow, well drained soils that formed in residuum derived from andesite or conglomerate and in some loess. These soils are on

mountains. Slopes are 4 to 75 percent. The mean annual precipitation is about 12 inches, and the mean annual air temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Lithic Argixerolls

Typical pedon: Chen very gravelly loam, in an area of map unit 1390; in an area where pebbles cover about 70 percent of the surface, cobbles cover 15 percent, and stones cover 5 percent:

A1—0 to 1 inch; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak very fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and few fine roots; many very fine interstitial pores; 45 percent pebbles and 10 percent cobbles; neutral (pH 6.8); clear smooth boundary. (1 to 6 inches thick)

A2—1 to 7 inches; grayish brown (10YR 5/2) very gravelly loam, very dark brown (10YR 2/2) moist; weak very fine subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; many very fine, common fine, and few medium and coarse roots; few very fine interstitial pores; 40 percent pebbles and 15 percent cobbles; neutral (pH 6.8); clear smooth boundary. (1 to 8 inches thick)

Bt—7 to 17 inches; grayish brown (10YR 5/2) extremely gravelly clay, dark brown (10YR 3/3) moist; moderate very fine subangular blocky structure; slightly hard, very friable, very sticky and very plastic; common very fine and few fine and medium roots, mainly along rock surfaces; 50 percent pebbles and 15 percent cobbles; few pressure faces on ped surfaces; neutral (pH 7.0); abrupt wavy boundary. (4 to 12 inches thick)

2R—17 inches; hard, fractured andesite.

Type location: White Pine County, Nevada; about 5 miles northwest of Monte Neva Hot Springs, in the Egan Range; about 2,600 feet west and 450 feet south of the northeast corner of sec. 7, T. 21 N., R. 63 E.; north latitude of 39 degrees, 42 minutes, 36 seconds; west longitude of 114 degrees, 53 minutes, 36 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 43 to 47 degrees

Mollic epipedon: 7 to 17 inches thick, generally including all or the upper part of the argillic horizon

Depth to bedrock: 12 to 20 inches

Reaction: Slightly acid to mildly alkaline throughout the profile

A horizon:

Value—4 to 6 dry (less than 5.5 when mixed to a depth of 7 inches), 2 or 3 moist
 Chroma—2 or 3

Bt horizon:

Hue—dominantly 7.5YR or 10YR, but 5YR common in areas with high concentrations of iron in the parent material
 Value—4 or 5 dry, 3 or 4 moist
 Chroma—2 to 4
 Texture—very gravelly clay, extremely gravelly clay, very cobbly clay, or extremely cobbly clay; in some pedons a thin Bt1 horizon of very gravelly clay loam with 35 to 40 percent clay
 Clay content—average of 40 to 55 percent
 Content of rock fragments—40 to 65 percent pebbles and cobbles, generally increasing with increasing depth
 Structure—weak to strong, fine or medium angular or subangular blocky or platy

Chiara Series

The Chiara series consists of well drained soils that are shallow to a duripan. These soils formed in alluvium derived from mixed rocks and mantled with loess high in content of volcanic ash. They are on fan piedmont remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Durorthids

Typical pedon: Chiara silt loam, in map unit 1032:

A—0 to 4 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 3/3) moist; moderate very thin platy structure; soft, very friable, slightly sticky and nonplastic; common very fine to coarse roots; common very fine vesicular pores; mildly alkaline (pH 7.8); abrupt smooth boundary. (2 to 6 inches thick)

Bw—4 to 9 inches; pale brown (10YR 6/3) silt loam, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine to medium roots; common very fine and fine tubular pores; moderately alkaline (pH 8.2); clear wavy boundary. (4 to 9 inches thick)

Bqk—9 to 19 inches; pale brown (10YR 6/3) silt loam, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine roots; few very fine interstitial pores; 50 percent, by volume, very fine to medium durinodes that are very hard, very

firm, and brittle when wet; many thick lime and silica coatings on all surfaces of pebbles; 5 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary. (4 to 10 inches thick)

2Bqkm—19 inches; light gray (10YR 7/2), indurated duripan that has a continuous lime and silica laminar cap.

Type location: White Pine County, Nevada; about 2 miles west of Jaimerena Ranch; about 300 feet south and 1,030 feet east of the northwest corner of sec. 19, T. 26 N., R. 55 E.; north latitude of 40 degrees, 6 minutes, 35 seconds; west longitude of 115 degrees, 43 minutes, 25 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 53 degrees F

Depth to lime: 7 to 15 inches

Depth to a duripan: 10 to 20 inches

Other features: A stratified gravelly and sandy substratum below a depth of 40 inches in some pedons

Control section:

Clay content—5 to 18 percent

Sand fraction—average of less than 15 percent fine sand and coarser sand

Content of rock fragments—average of 5 percent or less, mainly pebbles, but in some pedons 4 to 25 percent, mainly duripan fragments, in thin subhorizons

A horizon:

Value—3 or 4 moist

Chroma—2 or 3

Reaction—neutral to moderately alkaline

Bw horizon:

Value—6 or 7 dry, 3 to 5 moist

Chroma—3 or 4

Texture—very fine sandy loam, loam, or silt loam

Structure—weak to strong, fine to coarse subangular blocky or weak prismatic

Consistence—soft or slightly hard, very friable or friable, nonsticky or slightly sticky and nonplastic or slightly plastic

Reaction—neutral to strongly alkaline

Bqk horizon:

Value—6 or 7 dry, 4 or 5 moist

Texture—very fine sandy loam, loam, or silt loam

Structure—subangular blocky or massive

Consistence—very friable or friable, slightly sticky or nonsticky

Reaction—moderately alkaline and strongly alkaline
Cementation—20 to 60 percent weakly cemented and brittle durinodes 0.3 to 1 inch in diameter

Bqkm horizon:

Value—6 to 8 dry, 5 to 7 moist

Chroma—2 to 4

Structure—massive or weak or moderate thick platy

Clan Alpine Series

The Clan Alpine series consists of moderately deep, well drained soils that formed in residuum and colluvium derived from monzonite. These soils are on the side slopes of mountains. Slopes are 30 to 50 percent. The mean annual precipitation is about 15 inches, and the mean annual air temperature is about 41 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Typic Argixerolls

Typical pedon: Clan Alpine very cobbly sandy loam, in map unit 1850; in an area where pebbles cover about 30 percent of the surface, cobbles cover 15 percent, and stones cover 2 percent:

A1—0 to 4 inches; dark grayish brown (10YR 4/2) very cobbly sandy loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; 30 percent pebbles, 15 percent cobbles, and 2 percent stones; neutral (pH 7.2); abrupt smooth boundary. (1 to 5 inches thick)

A2—4 to 10 inches; grayish brown (10YR 5/2) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine roots; common very fine tubular and interstitial pores; 30 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral (pH 7.2); clear wavy boundary. (4 to 10 inches thick)

Bt1—10 to 17 inches; yellowish brown (10YR 5/4) very cobbly clay loam, dark yellowish brown (10YR 4/4) moist; moderate coarse subangular blocky structure parting to moderate fine subangular blocky; slightly hard, friable, sticky and plastic; common very fine to very coarse roots; few fine tubular and many very fine interstitial pores; common moderately thick clay films bridging sand grains; 35 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral (pH 7.2); clear irregular boundary. (3 to 8 inches thick)

Bt2—17 to 30 inches; light yellowish brown (10YR 6/4) very gravelly clay loam, yellowish brown (10YR 5/4) moist; moderate coarse subangular blocky structure parting to moderate fine subangular blocky; hard,

friable, sticky and plastic; few fine and medium roots; many very fine and fine interstitial pores; thin clay films bridging sand grains; 45 percent pebbles and 10 percent cobbles; mildly alkaline (pH 7.4); abrupt irregular boundary. (4 to 18 inches thick)

Cr—30 inches; fractured, weathered monzonite.

Type location: White Pine County, Nevada; about 2.5 miles south and 3 miles west of Monte Neva Warm Springs; about 1,400 feet west and 200 feet north of the projected southeast corner of sec. 32, T. 21 N., R. 63 E.; north latitude of 39 degrees, 38 minutes, 13 seconds; west longitude of 114 degrees, 52 minutes, 19 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from midsummer through fall, moist from midfall through midsummer

Soil temperature: 43 to 45 degrees F

Mollic epipedon: 8 to 14 inches thick, including the Bt1 horizon in some pedons

Thickness of the solum: 20 to 40 inches

Depth to weathered bedrock (paralithic contact): 20 to 40 inches

Depth to hard bedrock: 40 to 60 inches

Other features: In some pedons, a BC horizon overlying the paralithic contact

Control section:

Clay content—25 to 35 percent

Content of rock fragments—35 to 60 percent, mainly pebbles and cobbles

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

B horizon:

Value—dominantly 6 or 7 dry, 4 or 5 moist, but in some pedons 5 dry and 3 moist in the upper part
Chroma—3 or 4

Texture—very cobbly clay loam, very cobbly loam, or very gravelly clay loam

Structure—subangular or angular blocky

Consistence—slightly hard or hard

Reaction—neutral or mildly alkaline

Cliffdown Series

The Cliffdown series consists of very deep, somewhat excessively drained soils that formed in alluvium derived from limestone and dolomite. These soils are on inset fans. Slopes are 4 to 15 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 53 degrees F.

Taxonomic class: Loamy-skeletal, mixed (calcareous), mesic Typic Torriorthents

Typical pedon: Cliffdown very gravelly sandy loam, in map unit 1830; in an area where pebbles cover about 30 percent of the surface:

- A—0 to 3 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 4/3) moist; weak medium platy structure; soft, very friable, nonsticky and nonplastic; common very fine roots; few very fine interstitial pores; 40 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (2 to 4 inches thick)
- C1—3 to 15 inches; pale brown (10YR 6/3) very gravelly fine sandy loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine to coarse roots; common fine tubular pores; 35 percent pebbles; few thin lime coatings on the underside of pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (8 to 12 inches thick)
- C2—15 to 36 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine to coarse roots; common fine tubular pores; 35 percent pebbles and 5 percent cobbles; few thin lime coatings on the underside of rock fragments; few pockets of gravelly fine sandy loam as much as 12 inches across; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (6 to 21 inches thick)
- C3—36 to 60 inches; pale brown (10YR 6/3) very gravelly fine sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; few fine and medium roots; common fine tubular pores; 30 percent pebbles, 5 percent cobbles, and 5 percent stones; thin coatings of lime on rock fragments; violently effervescent; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; about 8 miles southeast of the Bull Creek Ranch; 3,000 feet south and 1,600 feet east of the northwest corner of sec. 22, T. 13 N., R. 57 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist for short periods in winter and spring, dry from late spring through fall

Soil temperature: 53 to 59 degrees F

Other features: In some pedons, an A horizon with 1/2 unit of value darker than the C horizon; in some pedons, a weak Bk horizon; in some pedons, few thin lime coatings on pebbles

Control section:

Clay content—5 to 15 percent

Content of rock fragments—average of 35 to 50 percent

Texture—stratified gravelly sandy loam to very gravelly fine sandy loam

Profile:

Hue—10YR or 7.5YR

Value—6 or 7 dry, 3 to 5 moist

Chroma—2 to 4

Reaction—moderately alkaline or strongly alkaline

Effervescence—slightly effervescent to strongly effervescent, increasing to violently effervescent with increasing depth

Cowgil Series

The Cowgil series consists of very deep, well drained soils that formed in mixed alluvium and, in some areas, alluvium derived from andesite. These soils are on fan piedmont remnants. Slopes are 0 to 15 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Xerollic Haplargids

Typical pedon: Cowgil very gravelly sandy loam, in map unit 190; in an area where pebbles cover about 40 percent of the surface and cobbles and stones cover 5 percent:

- A—0 to 4 inches; yellowish brown (10YR 5/4) very gravelly sandy loam, dark brown (10YR 3/3) moist; moderate very thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common fine tubular pores; 35 percent pebbles, 5 percent cobbles, and 1 percent stones; mildly alkaline (pH 7.8); abrupt smooth boundary. (2 to 4 inches thick)
- Bt1—4 to 13 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 4/3) moist; moderate very fine and fine subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine to coarse roots; common very fine tubular pores; common thin clay films bridging sand grains and lining pores; 35 percent pebbles; mildly alkaline (pH 7.9); clear wavy boundary. (2 to 13 inches thick)
- Bt2—13 to 21 inches; light yellowish brown (10YR 6/4) extremely gravelly sandy clay loam, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine and few medium roots; common very fine tubular pores; common thin clay films bridging sand grains and coating faces of peds;

60 percent pebbles and 10 percent cobbles; moderately alkaline (pH 8.2); gradual wavy boundary. (2 to 13 inches thick)

2Bk1—21 to 35 inches; light yellowish brown (10YR 6/4) extremely gravelly loamy sand, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; few fine weakly cemented masses of lime throughout the horizon; thick lime coatings on all surfaces of rock fragments; 45 percent pebbles and 25 percent cobbles; strongly effervescent; strongly alkaline (pH 8.8); gradual wavy boundary. (10 to 20 inches thick)

2Bk2—35 to 61 inches; yellowish brown (10YR 5/4) very gravelly loamy sand, dark yellowish brown (10YR 4/4) moist; single grained; loose, slightly sticky and slightly plastic; common very fine and fine roots; few fine tubular pores; thin patchy lime coatings on the underside of rock fragments; 40 percent pebbles and 15 percent cobbles; strongly effervescent; strongly alkaline (pH 8.8).

Type location: White Pine County, Nevada; about 10 miles north of the intersection of U.S. Highway 50 and Nevada Route 892; about 300 feet south and 200 feet east of the northwest corner of sec. 27, T. 20 N., R. 55 E.; north latitude of 115 degrees, 46 minutes, 10 seconds; west longitude of 40 degrees, 34 minutes, 30 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 54 degrees F

Combined thickness of the A and Bt horizons: 20 to 30 inches

Control section:

Clay content—average of 20 to 35 percent
Content of rock fragments—35 to 60 percent, mostly pebbles, but including cobbles and stones

A horizon:

Value—5 to 7 dry, 3 to 5 moist
Chroma—2 to 4 dry, 2 or 3 moist
Reaction—mildly alkaline or moderately alkaline

Bt horizon:

Value—5 or 6 dry, 3 to 5 moist
Chroma—3 or 4
Texture—dominantly gravelly or very gravelly sandy clay loam in the upper part and very gravelly or extremely gravelly sandy clay loam in the lower

part; in some pedons, subhorizons of very gravelly loam or very gravelly clay loam

Structure—subangular blocky, prismatic, or massive in the lower subhorizon

Reaction—mildly alkaline or moderately alkaline

Effervescence—noneffervescent or slightly effervescent in the lower subhorizon

2Bk horizon:

Value—5 to 8 dry, 4 to 7 moist

Chroma—2 to 4 dry, 3 to 5 moist

Texture of the fraction less than 2 mm in size—coarse sand, loamy sand, or sand

Clay content—average of 2 to 10 percent

Content of rock fragments—45 to 70 percent pebbles and cobbles

Reaction—moderately alkaline or strongly alkaline

Effervescence—slightly effervescent or strongly effervescent

Other features—in some pedons, silica or lime coatings on rock fragments; in some pedons, few weakly cemented masses of lime

Cropper Series

The Cropper series consists of well drained soils that are shallow over hard bedrock. These soils formed in residuum and colluvium derived from andesite and conglomerate. They are on the side slopes of mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Cropper very cobbly loam, in map unit 481; in an area where pebbles cover about 20 percent of the surface, cobbles cover 15 percent, and stones cover 5 percent:

A—0 to 4 inches; dark grayish brown (10YR 4/2) very cobbly loam, very dark brown (10YR 2/2) moist; moderate very fine and fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine tubular and interstitial pores; 20 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral (pH 7.2); abrupt smooth boundary. (3 to 5 inches thick)

Bt1—4 to 7 inches; dark grayish brown (10YR 4/2) extremely gravelly sandy clay loam, very dark grayish brown (10YR 3/2) moist; moderate very fine and fine

subangular blocky structure; hard, firm, sticky and plastic; common very fine to coarse roots; common very fine and fine tubular pores; few fine clay films on peds; 50 percent pebbles and 10 percent cobbles; neutral (pH 7.2); clear smooth boundary. (3 to 5 inches thick)

Bt2—7 to 16 inches; dark yellowish brown (10YR 4/4) extremely gravelly sandy clay loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; common very fine to coarse roots; common very fine and fine tubular pores; many moderately thick clay films on faces of peds; 60 percent pebbles and 10 percent cobbles; mildly alkaline (pH 7.4); abrupt wavy boundary. (8 to 10 inches thick)

R—16 inches; hard andesite.

Type location: White Pine County, Nevada; about 1/2 mile south of Quaky Spring; about 200 feet south and 1,000 feet east of the northwest corner of sec. 36, T. 13 N., R. 63 E.; north latitude of 38 degrees, 56 minutes, 00 seconds; west longitude of 114 degrees, 51 minutes, 21 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry for 70 to 120 consecutive days in summer and fall during most years

Soil temperature: 44 to 47 degrees

Mollic epipedon: 7 to 10 inches thick, including the upper part of the argillic horizon

Reaction: Neutral or mildly alkaline

Depth to bedrock: 14 to 20 inches

Control section:

Clay content—average of 27 to 35 percent

Content of rock fragments—average of 60 to 75 percent, mainly pebbles

A horizon:

Value—3 to 4 dry, 2 or 3 moist

Chroma—1 to 3 dry or moist

Bt horizon:

Hue—10YR or 7.5YR

Value—3 or 4 dry, 2 or 3 moist

Chroma—2 to 4 dry or moist

Texture—extremely gravelly sandy clay loam or extremely gravelly clay loam

Structure—subangular or angular blocky

Reaction—neutral or mildly alkaline in the upper part, mildly alkaline in the lower part

Other features—overlying the bedrock in some pedons, thin subhorizons of sandy clay with 35 to 50 percent clay

Devilsgait Series

The Devilsgait series consists of very deep, very poorly drained soils that formed in silty alluvium derived from mixed rocks and in some loess and volcanic ash. These soils are on flood plains and, in some areas, lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Cumulic Haplaquolls

Typical pedon: Devilsgait silt loam, in map unit 1131:

A1—0 to 10 inches; gray (10YR 5/1) silt loam, very dark gray (10YR 3/1) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; common very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4); gradual smooth boundary. (2 to 10 inches thick)

A2—10 to 18 inches; dark gray (10YR 4/1) silt loam, very dark grayish brown (10YR 3/2) moist; few fine distinct yellowish brown (10YR 5/8) mottles; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; few very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4); gradual smooth boundary. (0 to 6 inches thick)

A3—18 to 28 inches; gray (10YR 5/1) silty clay loam, very dark grayish brown (10YR 3/2) moist; few medium distinct yellowish brown (10YR 5/4) mottles; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; few very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (3 to 10 inches thick)

A4—28 to 40 inches; gray (10YR 5/1) silty clay loam, very dark gray (10YR 3/1) moist; few large distinct yellowish brown (10YR 5/4) mottles; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine and few medium roots; few very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (4 to 15 inches thick)

C—40 to 60 inches; light brownish gray (10YR 6/2) silty clay loam, dark gray (5Y 4/1) moist; few large distinct yellowish brown (10YR 5/4) mottles; massive; slightly hard, friable, sticky and plastic; strongly effervescent; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; about 4 miles southeast of Ely, in Steptoe Valley; about 2,000 feet east and 2,200 feet north of the southwest

corner of sec. 8, T. 15 N., R. 64 E.; north latitude of 39 degrees, 10 minutes, 47 seconds; west longitude of 114 degrees, 48 minutes, 38 seconds

Range in Characteristics

Soil moisture: Saturated at or near the surface for at least 1 month in most years, mainly from late winter through early summer

Soil temperature: 47 to 50 degrees F

Mollic epipedon: 24 to 50 inches thick

Reaction: Dominantly mildly alkaline or moderately alkaline; in some pedons strongly alkaline in the upper part of the profile

Other features: Some pedons have a gravelly substratum below a depth of 40 inches. Some areas are drained because of stream channel entrenchment.

Control section:

Clay content—20 to 35 percent

Texture—dominantly stratified silt loam and silty clay loam; in some pedons, thin strata of silty clay or loam in the lower part

Sand fraction—less than 15 percent fine sand and coarser sand

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 or 2

Other features—a buried A horizon in some pedons

C horizon:

Hue—10YR, 2.5Y, or 5Y

Value—3 to 5 moist

Chroma—1 or 2

Dewar Series

The Dewar series consists of well drained soils that are shallow to a duripan. These soils formed in loess and silty alluvium derived from mixed rocks and in some volcanic ash. They are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Durargids

Typical pedon: Dewar gravelly silt loam, in map unit 1050; in an area where pebbles cover about 5 percent of the surface:

A—0 to 3 inches; light brownish gray (10YR 6/2) gravelly silt loam, dark grayish brown (10YR 4/2) moist; moderate medium platy structure; slightly hard, friable, sticky and plastic; many very fine and fine

roots; common fine vesicular pores; 15 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 5 inches thick)

Bt—3 to 12 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine and fine and common medium roots; common fine interstitial and tubular pores; few thin clay films on faces of peds; 15 percent pebbles; moderately alkaline (pH 8.2); abrupt smooth boundary. (3 to 14 inches thick)

Btqk—12 to 18 inches; light brownish gray (10YR 6/2) gravelly silt loam, yellowish brown (10YR 5/4) moist; moderate and strong fine and medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few fine and medium roots; common fine tubular pores; 20 percent weak durinodes; few moderately thick and thick clay films on faces of peds; thin lime coatings on rock fragments with few thin pendants on the underside; 20 percent pebbles and 2 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (0 to 8 inches thick)

Bqkm1—18 to 25 inches; white (10YR 8/2), indurated duripan, light gray (10YR 7/2) moist; common tonguing of light brownish gray (10YR 6/2) gravelly loam with cracks more than 4 inches apart; extremely hard, extremely firm; violently effervescent; strongly alkaline (pH 8.4); abrupt smooth boundary. (3 to 11 inches thick)

Bqkm2—25 to 37 inches; white (10YR 8/2), indurated duripan, light gray (10YR 7/2) moist; massive; extremely hard, extremely firm; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary. (0 to 20 inches thick)

Bqkm3—37 to 60 inches; light gray (10YR 7/2), strongly cemented duripan with discontinuous lenses of gravelly sandy loam; light yellowish brown (10YR 6/4) moist; very hard, very firm; common fine interstitial pores; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 7 miles southeast of Railroad Pass, in Huntington Valley; about 2,500 feet east and 600 feet south of the projected northwest corner of sec. 19, T. 25 N., R. 55 E.; north latitude of 40 degrees, 2 minutes, 18 seconds; west longitude of 115 degrees, 42 minutes, 32 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Depth to an indurated duripan: 13 to 20 inches

Reaction: In the A and Bt horizons, neutral to moderately alkaline

Control section:

Clay content—average of 27 to 35 percent

Content of rock fragments—15 to 30 percent

A horizon:

Value—3 or 4 moist

Chroma—2 or 3

Bt horizon:

Value—6 or 7 dry, 3 or 4 moist

Chroma—2 to 4 dry, 3 or 4 moist

Texture—gravelly silty clay loam or gravelly clay loam

Clay content—27 to 35 percent

Content of rock fragments—15 to 30 percent pebbles

Structure—weak to strong, fine to coarse subangular blocky

Consistence—slightly hard or hard, friable or very friable

Btkq horizon (if it occurs):

Clay content—15 to 27 percent

Durinodes—weak or very weak, less than 30 percent

Bkqm horizon:

Structure—massive or moderately thick or very thick platelike layers

Cementation—in some pedons, alternately strongly cemented and discontinuously indurated horizons below the duripan

Other features—in some pedons, a 1- to 3-inch zone of degraded duripan material along the upper boundary of the horizon

Doten Series

The Doten series consists of very deep, moderately well drained soils that formed in lacustrine sediments. These soils are on lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Entic Chromoxererts

Typical pedon: Doten silty clay, in map unit 970:

A—0 to 5 inches; very pale brown (10YR 7/3) silty clay, brown (10YR 5/3) moist; strong very fine subangular blocky structure; hard, firm, very sticky and very plastic; many very fine and fine roots; common very fine interstitial pores; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary. (5 to 18 inches thick)

Bk1—5 to 20 inches; pale brown (10YR 6/3) silty clay, brown (10YR 5/3) moist; moderate very coarse prismatic structure parting to moderate fine angular blocky; very hard, very firm, very sticky and very plastic; common very fine and fine roots; common very fine and fine tubular pores; very few thin lime filaments lining pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (4 to 14 inches thick)

Bk2—20 to 53 inches; pale brown (10YR 6/3) silty clay, brown (10YR 5/3) moist; few faint brown (10YR 5/3) mottles; moderate very coarse prismatic structure parting to moderate fine angular blocky; very hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; few intersecting slickensides; few thin lime films lining pores; few soft masses of lime; violently effervescent; strongly alkaline (pH 8.6); gradual wavy boundary. (15 to 34 inches thick)

Bky—53 to 80 inches; grayish brown (10YR 5/2) clay, dark grayish brown (10YR 4/2) moist; common distinct yellowish brown (10YR 5/4) mottles; moderate very coarse prismatic structure parting to moderate fine angular blocky; very hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; few thin lime films along cracks; few fine, soft masses of lime and gypsum; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 10 miles south of U.S. Highway 50, in Jakes Valley; about 500 feet east and 2,200 feet south of the northwest corner of sec. 3, T. 16 N., R. 60 E., Mount Diablo meridian; north latitude of 39 degrees, 17 minutes, 5 seconds; west longitude of 115 degrees, 12 minutes and 40 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; dry in summer and fall, moist in winter and early spring

Soil temperature: 47 to 52 degrees F

Depth to mottles: 22 to 36 inches

Other features: In some pedons, very shallow ponding in spring

Control section:

Clay content—40 to 60 percent

A horizon:

Hue—10YR or 2.5Y

Value—4 to 7 dry, 3 to 5 moist

Chroma—2 or 3

Reaction—mildly alkaline to strongly alkaline

Effervescence—generally noneffervescent in the

upper part; ranging to violently effervescent in some pedons

Bk horizon:

Hue—10YR or 2.5Y

Value—5 or 6 dry, 4 or 5 moist

Chroma—2 to 4

Texture—dominantly clay or silty clay; in some pedons, silty clay loam in the lower part

Reaction—moderately alkaline to very strongly alkaline

Other features—in some pedons, gypsum in the lower part

Duffer Series

The Duffer series consists of very deep, poorly drained soils that formed in mixed alluvium and lake sediments. These soils are on axial-stream flood plains and alluvial flats. Slopes are 0 to 2 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Fine-silty, carbonatic, mesic Aquic Calciorthids

Typical pedon: Duffer silt loam, in map unit 542:

A—0 to 6 inches; light brownish gray (10YR 6/2) silt loam, grayish brown (10YR 5/2) moist; moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine and fine tubular and interstitial pores; few soft masses of lime; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (2 to 6 inches thick)

Bw—6 to 20 inches; light gray (10YR 7/2) silty clay loam, grayish brown (10YR 5/2) moist; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; common very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (8 to 23 inches thick)

Bk1—20 to 28 inches; white (10YR 8/1) silty clay loam, light brownish gray (10YR 6/2) moist; massive; hard, friable, sticky and plastic; few very fine and fine roots; few fine tubular pores; common fine and medium lime concretions; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary. (6 to 11 inches thick)

Bk2—28 to 60 inches; white (10YR 8/1) silty clay loam, light gray (10YR 6/1) moist; massive; hard, friable, sticky and plastic; very few very fine roots; few fine tubular pores; many fine and medium lime concretions; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 4.6 miles northwest of McGill; 0.25 mile south and 0.05 mile west of the northeast corner of sec. 11, T. 18 N., R. 63 E.; north latitude of 36 degrees, 26 minutes, 45 seconds; west longitude of 114 degrees, 50 minutes, 36 seconds

Range in Characteristics

Soil moisture: Between depths of 18 and 36 inches, saturated in early spring and usually moist because of capillary moisture from ground water; periodically dry in summer and fall

Soil temperature: 47 to 52 degrees F

Depth to the calcic horizon: 12 to 29 inches

Reaction: Dominantly strongly alkaline or very strongly alkaline; in some pedons, moderately alkaline in some parts

Other features: The upper 20 to 30 inches generally is strongly saline-sodic affected unless reclaimed.

Control section:

Clay content—20 to 35 percent

Texture—silt loam or silty clay loam

Calcium carbonate equivalent—40 to 60 percent

A horizon:

Hue—10YR to 5Y

Value—5 to 7 dry, 3 to 5 moist

Chroma—1 to 4

Bw horizon:

Hue—10YR or 2.5Y

Value—4 or 5 moist

Chroma—2 to 4

Structure—mainly weak or moderate, very fine to medium granular, subangular blocky, or platy; in some pedons, massive in the lower part

Bk horizon:

Hue—10YR to 5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—1 to 4

Structure—subangular blocky or massive

2C horizon (if it occurs)

Hue—10YR to 5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—1 to 4

Texture—stratified very fine sandy loam to silty clay loam

Clay content—15 to 30 percent

Eaglepass Series

The Eaglepass series consists of very shallow, well drained soils that formed in residuum and colluvium

derived from limestone and dolomite. These soils are on mountains and hills. Slopes are 30 to 75 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic
Lithic Xeric Torriorthents

Typical pedon: Eaglepass extremely stony loam, in map unit 650; in an area where pebbles cover about 40 percent of the surface, cobbles cover 15 percent, and stones cover 20 percent:

A—0 to 1 inch; pale brown (10YR 6/3) extremely stony loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; few fine interstitial pores; 40 percent pebbles, 15 percent cobbles, and 20 percent stones; moderately alkaline (pH 8.0); violently effervescent; abrupt smooth boundary. (0 to 2 inches thick)

C—1 to 4 inches; pale brown (10YR 6/3) extremely stony loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common fine and medium roots; common fine tubular pores; 40 percent pebbles, 15 percent cobbles, and 20 percent stones; moderately alkaline (pH 8.0); violently effervescent; abrupt wavy boundary. (2 to 6 inches thick)

R—4 inches; limestone.

Type location: White Pine County Nevada; about 5.7 miles northwest of Bull Creek Ranch; about 2,400 feet west and 400 feet south of the northwest corner of sec. 6, T. 14 N., R. 56 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall, except for 10 to 20 cumulative days between July and October because of convection storms

Soil temperature: 50 to 53 degrees F

Depth to bedrock: 4 to 6 inches

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Control section:

Texture of the fraction less than 2 mm in size—loam, fine sandy loam, or sandy loam

Clay content—8 to 18 percent

Content of rock fragments—60 to 75 percent, including pebbles, cobbles, and stones

Carbonates—calcareous in all parts; violently effervescent

Calcium carbonate equivalent—more than 40 percent in the fraction less than 20 mm in size

A horizon:

Value—5 to 7 dry, 3 to 5 moist
Chroma—3 or 4

C horizon:

Value—6 or 7 dry, 4 or 5 moist
Chroma—3 or 4

Other features—lime pendants and coatings on rock fragments in some pedons

Eganroc Series

The Eganroc series consists of moderately deep, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on the side slopes of mountains. Slopes are 30 to 75 percent. The mean annual precipitation is about 25 inches, and the mean annual air temperature is about 41 degrees F.

Taxonomic class: Loamy-skeletal, mixed Calcic Pachic Cryoborolls

Typical pedon: Eganroc very stony loam, in map unit 1360; in an area where pebbles cover about 30 percent of the surface, cobbles cover 30 percent, and stones cover 15 percent:

A1—0 to 2 inches; grayish brown (10YR 5/2) very stony loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular and interstitial pores; 30 percent pebbles, 10 percent cobbles, and 15 percent stones; mildly alkaline (pH 7.8); abrupt smooth boundary. (1 to 5 inches thick)

A2—2 to 5 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; many very fine tubular pores; common thin lime coatings on the underside of pebbles; 45 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary. (2 to 8 inches thick)

A3—5 to 9 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine to coarse roots; many very fine tubular and interstitial pores; common thin lime coatings on the underside of pebbles; 40 percent pebbles and 10 percent cobbles; mildly alkaline (pH 7.8); gradual smooth boundary. (0 to 6 inches thick)

2Bk1—9 to 22 inches; grayish brown (10YR 5/2) extremely gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky

structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine to coarse roots; many very fine interstitial pores; many moderately thick lime coatings on the underside of pebbles; 65 percent pebbles and 5 percent cobbles; slightly effervescent; mildly alkaline (pH 7.8); clear wavy boundary. (6 to 16 inches thick)

2Bk2—22 to 34 inches; brown (10YR 5/3) extremely gravelly loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine to coarse roots; many very fine tubular pores; many moderately thick lime coatings on the underside of pebbles with common lime pendants; 65 percent pebbles and 10 percent cobbles; slightly effervescent; moderately alkaline (pH 8.0); abrupt irregular boundary. (10 to 16 inches thick)

R—34 inches; dolomite; slightly effervescent.

Type location: White Pine County, Nevada; about 4 miles north of Cherry Creek; about 1,300 feet west and 1,300 feet north of the southeast corner of sec. 12, T. 24 N., R. 62 E.; north latitude of 39 degrees, 57 minutes, 38 seconds; west longitude of 114 degrees, 53 minutes, 48 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from midsummer through early fall; moist from late fall through early summer

Soil temperature: 41 to 45 degrees F;

Average summer soil temperature: 54 to 59 degrees F

Mollic epipedon: 15 to 25 inches thick

Depth to the calcic horizon: 9 to 15 inches

Depth to bedrock: 30 to 40 inches

Control section:

Clay content—18 to 27 percent

Content of rock fragments—35 to 70 percent, including 5 to 15 percent cobbles

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Bk or 2Bk horizon:

Value—4 to 6 dry, 2 to 5 moist

Chroma—2 or 3

Texture—very gravelly or extremely gravelly loam

Reaction—mildly alkaline or moderately alkaline

mountains. Slopes are 4 to 50 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 43 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Typic Palexerolls

Typical pedon: Eoj very stony loam, in map unit 1180; in an area where pebbles cover about 30 percent of the surface, cobbles cover 15 percent, and stones cover 10 percent:

A—0 to 8 inches; grayish brown (10YR 5/2) very stony loam, very dark grayish brown (10YR 3/2) moist; weak very fine and fine subangular blocky structure parting to fine granular; soft, very friable, sticky and plastic; common very fine and fine roots; common very fine and fine tubular pores; 25 percent pebbles, 10 percent cobbles, and 10 percent stones; mildly alkaline (pH 7.4); abrupt smooth boundary. (6 to 14 inches thick)

2Bt1—8 to 17 inches; brown (10YR 5/3) cobbly clay, dark brown (10YR 3/3) moist; moderate fine and medium angular blocky structure; very hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; many prominent clay films on faces of peds; 15 percent pebbles, 10 percent cobbles, and 1 percent stones; mildly alkaline (pH 7.4); clear smooth boundary. (6 to 14 inches thick)

2Bt2—17 to 24 inches; brown (10YR 5/3) cobbly clay, dark brown (10YR 4/3) moist; moderate fine and medium angular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; common very fine and fine tubular pores; many prominent clay films on faces of peds; 10 percent pebbles, 15 percent cobbles, and 1 percent stones; slightly effervescent; mildly alkaline (pH 7.8); clear smooth boundary. (5 to 12 inches thick)

2Btk1—24 to 36 inches; pale brown (10YR 6/3) cobbly clay, brown (10YR 4/3) moist; moderate fine and medium angular blocky structure; hard, firm, very sticky and very plastic; few very fine tubular pores; common distinct clay films on faces of peds; 10 percent pebbles, 15 percent cobbles, and 1 percent stones; common fine lime filaments; strongly effervescent; mildly alkaline (pH 7.8); clear smooth boundary. (8 to 16 inches thick)

2Btk2—36 to 60 inches; pale brown (10YR 6/3) cobbly clay, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, very sticky and very plastic; few very fine tubular pores; common distinct clay films on faces of peds; 15 percent pebbles, 15 percent cobbles, and 1 percent stones; common fine lime filaments; strongly effervescent; mildly alkaline (pH 7.8).

Eoj Series

The Eoj series consists of very deep, well drained soils that formed in colluvium derived from quartzite, conglomerate, and limestone. These soils are on hills and

Type location: White Pine County, Nevada; Egan Range; about 32 miles south of Ely; about 2,200 feet north and 600 feet west of the southeast corner of sec. 20, T. 11. N., R. 63 E.; north latitude of 47 degrees, 30 minutes, 32 seconds; west longitude of 114 degrees, 54 minutes, 38 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from summer through midfall, moist from late fall through spring

Soil temperature: 44 to 47 degrees F

Mollic epipedon: 12 to 20 inches thick

Depth to carbonates: 17 to 30 inches

Control section:

Clay content—40 to 60 percent

Content of rock fragments—15 to 35 percent stones, cobbles, and pebbles

Other features: An increase of 15 to 30 percent in content of clay at the upper boundary of the Bt horizon

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

2Bt horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—3 or 4

Content of rock fragments—15 to 35 percent cobbles and pebbles

Reaction—mildly alkaline or moderately alkaline

Effervescence—slightly effervescent or strongly effervescent in the lower part

Secondary carbonates—few or common lime filaments in the lower part in many pedons

Other features—pressure faces in the upper part in some pedons

Equis Series

The Equis series consists of very deep, poorly drained soils that formed in lacustrine sediments and mixed alluvium. These soils are on alluvial flats, flood plains, and lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Fine, carbonatic, mesic Typic Halaquepts

Typical pedon: Equis silty clay, in map unit 1130:

A—0 to 6 inches; light gray (5Y 7/1) silty clay, light gray (5Y 6/1) moist; mainly strong very coarse and coarse prismatic structure, but strong fine angular blocky structure in the upper 1 inch; very hard, very firm,

very sticky and very plastic; many very fine and fine roots; common fine tubular pores; strongly effervescent; strongly alkaline (pH 9.0); clear wavy boundary. (4 to 7 inches thick)

Bwg1—6 to 20 inches; white (5Y 8/1) silty clay, light gray (5Y 6/1) moist; many fine prominent light yellowish brown mottles; weak coarse prismatic structure parting to strong fine angular blocky; very hard, very firm, very sticky and very plastic; common fine roots; few fine tubular pores; strongly effervescent; strongly alkaline (pH 9.0); clear wavy boundary. (12 to 20 inches thick)

Bwg2—20 to 30 inches; white (10YR 8/1) silty clay, light gray (10YR 7/2) moist; strong fine angular blocky structure; very hard, very firm, very sticky and very plastic; few fine roots; few fine pores; strongly effervescent; strongly alkaline (pH 9.0); clear wavy boundary. (8 to 14 inches thick)

Bkg1—30 to 41 inches; white (10YR 8/1) silty clay, light gray (10YR 7/2) moist; moderate fine angular blocky structure; very hard, very firm, very sticky and very plastic; few fine roots; few fine tubular pores; few fine, soft masses of lime; strongly effervescent; strongly alkaline (pH 8.5); clear smooth boundary. (6 to 12 inches thick)

Bkg2—41 to 50 inches; white (10YR 8/1) silty clay loam, light gray (10YR 7/2) moist; moderate fine angular blocky structure; very hard, very firm, very sticky and very plastic; few fine roots; few fine tubular pores; few fine, soft masses of lime; strongly alkaline (pH 8.5); clear smooth boundary. (8 to 12 inches thick)

Cg—50 to 60 inches; white (10YR 8/1) silt loam, light gray (10YR 7/2) moist; massive; very hard, very firm, sticky and plastic; few very fine roots; very few fine tubular pores; common snail shell fragments; strongly effervescent, strongly alkaline (pH 8.5).

Type location: White Pine County, Nevada; about 45 miles north of Ely; about 2,575 feet west and 640 feet north of the southeast corner of sec. 13, T. 22 N., R. 63 E.; north latitude of 39 degrees, 46 minutes, 8 seconds; west longitude of 114 degrees, 47 minutes, 55 seconds

Range in Characteristics

Soil moisture: Usually moist at or near the surface; saturated to a depth of 5 to 20 inches in most years; depth to the water table ranging from about 1 foot in spring to 5 feet in late summer

Soil temperature: 48 to 52 degrees F

Reaction: Strongly alkaline or very strongly alkaline

Sodium adsorption ration (SAR): 20 to 70 percent in the upper 20 inches, decreasing to less than 5 percent below a depth of 20 inches

Calcium carbonate equivalent: 45 to 65 percent; carbonates of clay size ranging from 30 to 45 percent in the upper 30 inches

A horizon:

Hue—10YR to 5Y, or N
Value—7 or 8 dry, 6 or 7 moist
Chroma—0 to 2

Bwg horizon:

Hue—10YR to 5Y, or N
Value—6 to 8 dry, 5 to 7 moist
Chroma—0 to 2
Clay content—40 to 50 percent silicate clay, 30 to 45 percent carbonates of clay size

Bkg horizon:

Hue—10YR to 5Y or N
Value—6 to 8 dry, 5 to 7 moist
Chroma—0 to 2
Texture—silty clay or silty clay loam
Clay content—30 to 45 percent silicate clay, 18 to 30 percent carbonates of clay size

Fax Series

The Fax series consists of well drained soils that are moderately deep over a duripan. These soils formed in alluvium derived from andesite and, in some areas, quartzite. They are on fan piedmont remnants. Slopes are 2 to 30 percent. The mean annual precipitation is about 12 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Aridic Durixerolls

Typical pedon: Fax very cobbly coarse sandy loam, in map unit 842; in an area where cobbles cover about 15 percent of the surface:

- A—0 to 3 inches; grayish brown (10YR 5/2) very cobbly coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; few fine roots; common very fine and fine vesicular pores; 30 percent pebbles and 15 percent cobbles; mildly alkaline (pH 7.6); abrupt smooth boundary. (2 to 5 inches thick)
- Bt1—3 to 7 inches; brown (10YR 5/3) very gravelly sandy clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine to coarse roots; common very fine and fine tubular pores; 30 percent pebbles and 5 percent cobbles; few thin patchy clay films; mildly alkaline (pH 7.8); clear smooth boundary. (2 to 10 inches thick)

Bt2—7 to 12 inches; brown (10YR 5/3) very gravelly sandy clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; common very fine to coarse roots; common very fine and fine tubular pores; 35 percent pebbles and 10 percent cobbles; few thin clay films lining pores; effervescent in spots in the lower 2 inches; moderately alkaline (pH 8.0); clear wavy boundary. (3 to 10 inches thick)

Bk—12 to 22 inches; white (10YR 8/2) very gravelly sandy clay loam, brown (10YR 5/3) moist; massive; hard, firm, slightly sticky and slightly plastic; few fine and medium roots; few fine tubular pores; 40 percent pebbles and 10 percent cobbles; violently effervescent; few fine, soft masses of lime; moderately alkaline (pH 8.2); abrupt wavy boundary. (10 to 14 inches thick)

Bqkm—22 to 48 inches; very pale brown (10YR 7/3), strongly cemented duripan, brown (10YR 5/3) moist; very cobbly and stony; thin strata and pockets of very cobbly loamy coarse sand; few fine roots in sandy strata and pockets.

Type location: White Pine County, Nevada; about 19 miles south of Ely; about 1,700 feet west and 100 feet south of the northeast corner of sec. 30, T. 13 N., R. 64 E.; north latitude of 38 degrees, 58 minutes, 1 second; west longitude of 114 degrees, 49 minutes, 20 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in late winter and spring, dry in summer and fall

Soil temperature: 47 to 50 degrees F

Mollic epipedon: 7 to 14 inches thick, including part or all of the Bt horizon

Depth to a duripan: 20 to 36 inches

Reaction: Mildly alkaline or moderately alkaline

Control section:

Clay content—20 to 35 percent

Content of rock fragments—35 to 55 percent

A horizon:

Hue—10YR or 7.5YR

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Bt horizon:

Hue—10YR or 7.5YR

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Texture—very cobbly or very gravelly sandy clay loam

Clay content—20 to 35 percent

Content of rock fragments—30 to 55 percent pebbles,
0 to 30 percent cobbles, 0 to 10 percent stones
Structure—moderate fine and medium subangular
blocky
Consistence—slightly hard or hard

Bk horizon:

Value—7 or 8 dry, 5 or 6 moist
Chroma—2 or 3
Texture—very gravelly or very cobbly sandy clay loam
or coarse sandy loam
Clay content—14 to 28 percent
Content of rock fragments—40 to 60 percent total; 30
to 50 percent pebbles, 5 to 30 percent cobbles, 0 to
20 percent stones
Structure—massive or weak medium subangular
blocky
Other features—high in content of disseminated lime

Garfan Series

The Garfan series consists of very deep, well drained soils that formed in alluvium or colluvium derived from quartzite. These soils are on fan piedmont remnants and, in some areas, on the side slopes of mountains. Slopes are 2 to 50 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 43 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Xerollic Paleargids

Typical pedon: Garfan very gravelly loam, on rangeland, in map unit 1700; in an area where pebbles cover about 70 percent of the surface, cobbles cover 10 percent, and stones cover 15 percent:

- A—0 to 8 inches; brown (10YR 4/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, friable, sticky and plastic; common very fine to medium roots; few very fine tubular pores; 30 percent pebbles, 10 percent cobbles and 5 percent stones; mildly alkaline (pH 7.6); abrupt wavy boundary. (5 to 9 inches thick)
- 2Bt1—8 to 17 inches; strong brown (7.5YR 5/6) extremely cobbly clay, strong brown (7.5YR 4/6) moist; moderate medium angular blocky structure; hard, firm, very sticky and very plastic; common very fine and fine roots matted on faces of peds; few very fine tubular pores; common thick clay films on faces of peds and lining pores; 50 percent pebbles and 30 percent cobbles; moderately alkaline (pH 8.0); clear wavy boundary. (6 to 18 inches thick)
- 2Bt2—17 to 27 inches; strong brown (7.5YR 5/6) extremely cobbly clay, strong brown (7.5YR 4/6)

moist; moderate medium angular blocky structure; hard, firm, very sticky and very plastic; few very fine roots matted on faces of peds; few very fine tubular pores; common thick clay films on faces of peds and lining pores; 55 percent pebbles and 35 percent cobbles; moderately alkaline (pH 8.2); clear wavy boundary. (6 to 18 inches thick)

- 2Bt3—27 to 60 inches; brown (7.5YR 5/4) extremely gravelly clay, dark brown (7.5YR 4/4) moist; lenses of extremely gravelly sandy clay; moderate medium angular blocky structure; hard, firm, very sticky and very plastic; few very fine roots matted on faces of peds; few very fine interstitial pores; common thick clay films on faces of peds and lining pores; 50 percent pebbles, 20 percent cobbles, and 5 percent stones; moderately alkaline (pH 8.2).

Type location: White Pine County, Nevada; about 4 miles northeast of Parker Station, in Cave Valley; about 1.8 miles north and 0.1 mile west of the northeast corner of sec. 3 in an unsectionalized area, T. 9 N., R. 64 E.; north latitude of 38 degrees, 41 minutes, 56 seconds; west longitude of 114 degrees, 46 minutes, 21 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through spring, dry from summer through midfall

Soil temperature: 42 to 46 degrees F

Depth to the upper boundary of the argillic horizon: 5 to 9 inches

Control section:

Clay content—35 to 45 percent
Content of rock fragments—60 to 90 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3

Bt horizon:

Hue—7.5YR or 10YR
Value—5 or 6 dry, 4 or 5 moist
Chroma—4 to 6

Texture—extremely cobbly clay or extremely cobbly clay loam in the upper part; extremely gravelly clay or extremely gravelly clay loam in the lower part

Clay content—35 to 45 percent
Content of rock fragments—40 to 55 percent pebbles and 20 to 35 percent cobbles and stones in the upper part; 40 to 60 percent pebbles and 5 to 25 percent cobbles and stones in the lower part; average total of more than 60 percent
Reaction—neutral to moderately alkaline

Genaw Series

The Genaw series consists of shallow, well drained soils that formed in loess-mantled residuum derived from tuffaceous sediments, dominantly siltstone. These soils are on hills. Slopes are 2 to 8 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Haplargids

Typical pedon: Genaw silt loam, in map unit 830; in an area where pebbles cover about 5 percent of the surface:

A—0 to 3 inches; light brownish gray (10YR 6/2) silt loam, dark brown (10YR 4/3) moist; moderate thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine and fine vesicular pores; 5 percent pebbles; moderately alkaline (pH 7.9); abrupt smooth boundary. (2 to 7 inches thick)

Btk1—3 to 7 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and common fine and medium roots; many very fine interstitial and common fine tubular pores; few faint colloid stains on mineral grains; few thin lime coatings on the underside of rock fragments; 15 percent pebbles; slightly effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (4 to 7 inches thick)

Btk2—7 to 10 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium prismatic structure parting to subangular blocky; slightly hard, friable, sticky and plastic; many very fine and common fine and medium roots; many very fine tubular pores; common thin clay films on faces of peds; common medium thick lime coatings on the underside of rock fragments; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (0 to 4 inches thick)

Bkq—10 to 16 inches; very pale brown (10YR 7/4) very gravelly loam, yellowish brown (10YR 5/6) moist; strong medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; common very fine tubular pores; 5 percent fine durinodes; common thick lime coatings on the underside of rock fragments; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear irregular boundary. (2 to 6 inches thick)

Cr—16 to 24 inches; weathered, fractured, calcareous

siltstone; common very fine and fine roots in fractures; thin lime coatings in fractures; violently effervescent

Type location: White Pine County, Nevada; about 5 miles north of Little Antelope Summit, in the White Pine Range; about 1,500 feet east and 1,000 feet north of the southwest corner of sec. 33, T. 19 N., R. 58 E.; north latitude of 39 degrees, 28 minutes, 1 second; west longitude of 115 degrees, 27 minutes, 6 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Depth to paralithic contact: 14 to 20 inches

Control section:

Clay content—18 to 30 percent

Content of rock fragments—15 to 35 percent

A horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3

Reaction—mildly alkaline or moderately alkaline

Btk horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—3 or 4

Texture of the fine-earth fraction—loam or clay loam

Content of rock fragments—15 to 35 percent, mainly pebbles

Clay content—18 to 30 percent

Effervescence—noneffervescent to strongly effervescent

Structure—angular or subangular blocky

Consistence—very friable or friable

Bkq horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 to 6

Texture of the fine-earth fraction—sandy loam or loam

Content of rock fragments—25 to 50 percent, mainly pebbles

Cementation—5 to 15 percent weak discontinuous cementation or weakly cemented durinodes

Reaction—moderately alkaline or strongly alkaline

Grink Series

The Grink series consists of shallow, well drained soils that formed in residuum and colluvium derived from calcareous sandstone, limestone, or dolomite. These soils are on mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 18 inches, and the mean annual air temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Haploxerolls

Typical pedon: Grink stony loam, in map unit 1222; in an area where pebbles cover about 25 percent of the surface, cobbles cover 2 percent, and stones cover 1 percent:

Oi—1 inch to 0; leaves and twigs.

A1—0 to 7 inches; very dark grayish brown (10YR 3/2) stony loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and plastic; many very fine and fine and common medium roots; common fine interstitial pores; 15 percent pebbles, 5 percent cobbles, and 10 percent stones; noneffervescent; mildly alkaline (pH 7.8); clear smooth boundary. (6 to 9 inches thick)

A2—7 to 12 inches; very dark grayish brown (10YR 3/2) very gravelly loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, sticky and plastic; many very fine and fine and common medium roots; common fine interstitial and tubular pores; common thin or moderately thick lime pendants on the underside of rock fragments; 55 percent pebbles and 5 percent cobbles; slightly effervescent; moderately alkaline (pH 8.0); clear wavy boundary. (3 to 5 inches thick)

Bk1—12 to 15 inches; dark grayish brown (10YR 4/2) very gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and plastic; many very fine to medium roots; common fine interstitial and tubular pores; common thin or moderately thick lime pendants on the underside of rock fragments; 55 percent pebbles and 5 percent cobbles; strongly effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (2 to 4 inches thick)

Bk2—15 to 19 inches; grayish brown (10YR 5/2) very gravelly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine and medium and few very fine roots; common fine interstitial pores; common thin or moderately thick lime pendants on the underside of rock fragments; 40 percent pebbles and 5 percent cobbles; strongly effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (3 to 5 inches thick)

2R—19 inches; yellow (2.5Y 7/6), calcareous sandstone.

Type location: White Pine County, Nevada; about 28 miles southeast of Ely, in the Schell Creek Range; about 1,000 feet east and 275 feet north of the southwest corner of sec. 20, T. 12 N., R. 65 E.; north

latitude of 38 degrees, 52 minutes, 51 seconds; west longitude of 114 degrees, 42 minutes, 7 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from summer through midfall, moist from late fall through spring

Soil temperature: 42 to 47 degrees F

Depth to bedrock: 14 to 20 inches

Mollic epipedon: 14 to 20 inches thick

Reaction: Mildly alkaline or moderately alkaline

Control section:

Clay content—12 to 18 percent

Content of rock fragments—35 to 60 percent, mostly pebbles

Texture—very gravelly loam or very gravelly fine sandy loam

Calcium carbonate equivalent—5 to 15 percent, by weight, in the fraction less than 20 mm in size

A horizon:

Value—3 to 5 dry, 2 to 4 moist

Chroma—2 or 3

Bk horizon:

Value—4 or 5 dry, 2 or 3 moist

Guiser Series

The Guiser series consists of very deep, well drained soils that formed in colluvium derived from quartzite and conglomerate. These soils are on the side slopes of mountains. Slopes are 30 to 75 percent. The mean annual precipitation is about 23 inches, and the mean annual air temperature is about 41 degrees F.

Taxonomic class: Loamy-skeletal, mixed Mollic Cryoboralfs

Typical pedon: Guiser extremely cobbly loam, in map unit 1431:

Oe—1 inch to 0; partly decomposed needles and twigs, black (10YR 2/1) moist; abrupt smooth boundary. (1 to 3 inches thick)

A1—0 to 7 inches; brown (10YR 5/3) extremely cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate very fine subangular blocky and fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine to coarse roots; many very fine and fine tubular and interstitial pores; 30 percent pebbles, 30 percent cobbles, and 15 percent stones; neutral (pH 7.0); abrupt smooth boundary. (4 to 8 inches thick)

A2—7 to 15 inches; brown (10YR 5/3) extremely cobbly coarse sandy loam, dark brown (10YR 4/3) moist;

moderate very fine subangular blocky and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine to coarse roots; many very fine and fine tubular and interstitial pores; 55 percent pebbles and 30 percent cobbles; mildly alkaline (pH 7.4); clear wavy boundary. (7 to 24 inches thick)

Bt—15 to 36 inches; light yellowish brown (10YR 6/4) extremely cobbly loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine to coarse roots; many very fine and fine tubular pores; common thin patchy clay films on peds; 35 percent pebbles and 30 percent cobbles; neutral (pH 7.2); gradual wavy boundary. (15 to 30 inches thick)

C—36 to 60 inches; very pale brown (10YR 7/3) extremely gravelly coarse sandy loam, brown (10YR 4/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; 75 percent pebbles and 10 percent cobbles; mildly alkaline (pH 7.6).

Type location: White Pine County, Nevada; 5,000 feet north and 1,025 feet west of the summit of Mount Grafton, in an unsurveyed area, T. 10 N., R. 64 E.; north latitude of 30 degrees, 42 minutes, 18 seconds; west longitude of 114 degrees, 44 minutes, 55 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from midsummer through fall, moist from winter through early summer

Soil temperature: 42 to 44 degrees F

Average summer soil temperature: 44 to 47 degrees F

Depth to the lower boundary of the Bt horizon: 32 to 60 inches

Reaction: Neutral or mildly alkaline

Control section:

Clay content—18 to 25 percent

Content of rock fragments—60 to 85 percent

A1 horizon:

Value—4 or 5 dry

Chroma—2 or 3

A2 horizon:

Value—5 to 7 dry, 4 to 6 moist

Chroma—2 to 4

Texture—extremely cobbly sandy loam or extremely cobbly coarse sandy loam

Content of rock fragments—65 to 85 percent, dominantly cobbles

Structure—subangular blocky or granular

Bt horizon:

Value—5 to 7 dry

Chroma—2 to 4

Texture—extremely cobbly loam or extremely cobbly sandy clay loam

Content of rock fragments—60 to 80 percent, dominantly cobbles

C horizon:

Value—6 or 7 dry

Chroma—2 to 4

Texture—extremely gravelly sandy loam or extremely gravelly coarse sandy loam

Content of rock fragments—60 to 85 percent, dominantly pebbles

Haarvar Series

The Haarvar series consists of shallow, well drained soils that formed in residuum derived from shale and siltstone. These soils are on the side slopes of hills and low mountains. Slopes are 4 to 50 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 53 degrees F.

Taxonomic class: Clayey, montmorillonitic (calcareous), mesic, shallow Xeric Torriorthents

Typical pedon: Haarvar gravelly clay loam, in map unit 631; in an area where pebbles cover about 70 percent of the surface:

A—0 to 2 inches; light brownish gray (10YR 6/2) gravelly clay loam, brown (10YR 5/3) moist; moderate medium platy structure; slightly hard, very friable, sticky and slightly plastic; few very fine roots; many very fine tubular pores; 20 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (1 to 3 inches thick)

C—2 to 10 inches; light brownish gray (10YR 6/2) clay, dark grayish brown (10YR 4/2) moist; moderate medium angular blocky structure; slightly hard, very friable, very sticky and very plastic; few very fine roots; common very fine tubular pores; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (8 to 18 inches thick)

Cr—10 to 22 inches; soft, highly weathered siltstone; few very fine roots; few fine coatings and soft masses of lime on fractures; violently effervescent.

Type location: White Pine County, Nevada; about 5 miles southeast of Pogue's Station; about 1,200 feet west and 700 feet north of the projected southwest corner of sec. 36, T. 16 N., R. 54 E.;

north latitude of 39 degrees, 12 minutes, 35 seconds;
west longitude of 115 degrees, 50 minutes, 51
seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall, except for 10 to 20 cumulative days between July and October because of convection storms

Soil temperature: 53 to 59 degrees F

Depth to soft bedrock: 10 to 20 inches

Reaction: Mildly alkaline or moderately alkaline

Effervescence: Slightly effervescent to strongly effervescent

Control section:

Clay content—average of 40 to 55 percent

Content of rock fragments—average of 5 to 10 percent

A horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

C horizon:

Hue—10YR, 2.5Y, or 5Y

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 to 6 dry or moist

Clay content—40 to 55 percent

Structure—massive or angular blocky

Content of rock fragments—0 to 10 percent

Hackwood Series

The Hackwood series consists of very deep, moderately well drained soils that formed in colluvium derived from quartzite and conglomerate and in some loess. These soils are on the side slopes of mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 18 inches, and the mean annual air temperature is about 41 degrees F.

Taxonomic class: Fine-loamy, mixed Pachic Cryoborolls

Typical pedon: Hackwood gravelly silt loam, in map unit 1860; in an area where pebbles cover about 20 percent of the surface:

Oi—1 inch to 0; aspen leaf litter. (0.5 inch to 4 inches thick)

A1—0 to 2 inches; dark grayish brown (10YR 4/2) gravelly silt loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very

fine to coarse roots; common fine tubular pores; 30 percent pebbles; neutral (pH 7.3); clear smooth boundary. (2 to 12 inches thick)

A2—2 to 8 inches; brown (10YR 4/3) gravelly silt loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine to coarse roots; common very fine tubular pores; common black organic coatings on faces of peds; 30 percent pebbles; neutral (pH 7.3); clear smooth boundary. (6 to 10 inches thick)

A3—8 to 22 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; many very fine to coarse roots; many very fine tubular pores; common black organic coatings on faces of peds; 25 percent pebbles; neutral (pH 7.3); clear smooth boundary. (0 to 16 inches thick)

AC—22 to 31 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; few very fine distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and plastic; few very fine to coarse roots; many very fine tubular pores; 20 percent pebbles; neutral (pH 7.3); clear smooth boundary. (0 to 12 inches thick)

2C—31 to 60 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 4/3) moist ex-ped, grayish brown (10YR 5/2) and dark grayish brown (10YR 4/2) moist in-ped; common very fine distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; few very fine to coarse roots; many very fine tubular pores; 40 percent pebbles; neutral (pH 7.3).

Type location: White Pine County, Nevada; about 4.5 miles northwest of Ward Charcoal Ovens State Park, in the Egan Range; about 2,800 feet east and 300 feet north of the projected southwest corner of sec. 17, T. 14 N., R. 63 E.; north latitude of 39 degrees, 4 minutes, 6 seconds; west longitude of 114 degrees, 55 minutes, 21 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from late summer through midfall, moist from late fall through midsummer; additional soil moisture supplied by lateral water movement in the lower part of the control section or in the substratum

Average annual soil temperature: 38 to 44 degrees F

Average summer soil temperature: 43 to 47 degrees F

Mollic epipedon: 16 to 35 inches thick

Depth to the 2C horizon: 30 to 49 inches

Reaction: Neutral or slightly acid, decreasing with increasing depth

Control section:

Texture—typically silt loam, gravelly silt loam, or gravelly loam; commonly very gravelly loam to very gravelly silty clay loam in the lower part

Clay content—average of 18 to 30 percent

Content of rock fragments—average of 15 to 35 percent, mainly pebbles

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 to 3 dry, 1 or 2 moist

2C horizon:

Hue—2.5Y or 10YR

Value—5 to 7 dry, 4 or 5 moist

Chroma—2 or 3

Structure—subangular blocky or massive

Consistence—slightly hard or hard, very friable or friable, slightly sticky or sticky and slightly plastic or plastic

Other features in the lower part of the 2C horizon—pores lined with very thin silt coatings or uncoated sand grains; in some pedons, few or common fine distinct mottles, yellowish brown (10YR 5/6) dry, dark yellowish brown (10YR 4/4) moist; in some pedons, few manganese stains coating pebbles and lining pores

percent pebbles; strongly effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (7 to 11 inches thick)

Bk1—8 to 14 inches; very pale brown (10YR 7/4) very channery loam, yellowish brown (10YR 5/4) moist; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine tubular pores; 25 percent pebbles and 25 percent channers; thin lime coatings on pebbles; violently effervescent; moderately alkaline (pH 8.0); clear wavy boundary. (3 to 9 inches thick)

Bk2—14 to 19 inches; yellow (10YR 7/6) extremely channery loam, yellowish brown (10YR 5/6 moist); weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine and medium roots; common very fine tubular pores; 40 percent pebbles, 30 percent channers, and 5 percent flagstones; rock fragments thinly coated with lime; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary. (0 to 12 inches thick)

R—19 inches; fractured, gray limestone.

Type location: White Pine County, Nevada; about 4³/₄ miles west and 4¹/₄ miles north of Monteneva Hot Springs; in an unsurveyed area about 1,300 feet south and 1,300 feet east of the projected northwest corner of sec. 31, T. 22 N., R. 63 E.; north latitude of 39 degrees, 43 minutes, 22 seconds; west longitude of 114 degrees, 52 minutes, 30 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from late summer to early fall, moist from midfall through early summer

Soil temperature: 37 to 42 degrees F

Average summer soil temperature: 50 to 59 degrees F

Depth to bedrock: 10 to 20 inches

Mollic epipedon: 7 to 11 inches thick

Control section:

Clay content—10 to 18 percent

Content of rock fragments—50 to 80 percent, mainly channers

Calcium carbonate equivalent—40 to 60 percent in the fraction less than 20 mm in size

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Bk horizon:

Value—5 to 7 dry, 4 or 5 moist

Chroma—2 to 6

Reaction—moderately alkaline or strongly alkaline

Halacan Series

The Halacan series consists of shallow, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on the crests and side slopes of mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 16 inches, and the mean annual air temperature is about 38 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic Cryic Lithic Rendolls

Typical pedon: Halacan very gravelly loam, in map unit 1171; in an area where pebbles cover about 30 percent of the surface, channers cover 30 percent, and flagstones cover 10 percent:

A—0 to 8 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine to medium roots; common very fine tubular pores; 55

Hardol Series

The Hardol series consists of very deep, well drained soils that formed in colluvium and residuum derived from limestone and dolomite. These soils are on the side slopes of mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 20 inches, and the mean annual air temperature is about 40 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic Calcic Pachic Cryoborolls

Typical pedon: Hardol very gravelly silt loam, in map unit 1175; in an area where pebbles cover about 20 percent of the surface, cobbles cover 20 percent, and stones cover 2 percent:

- Oe—1 inch to 0; needles, leaves, and twigs; abrupt smooth boundary.
- A—0 to 8 inches; dark grayish brown (10YR 4/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine to medium and common coarse roots; common fine tubular pores; 30 percent pebbles, 10 percent cobbles, and 5 percent stones; slightly effervescent; mildly alkaline (pH 7.7); clear smooth boundary. (3 to 10 inches thick)
- Bk1—8 to 12 inches; dark grayish brown (10YR 4/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine to medium and common coarse roots; common fine tubular pores; 40 percent pebbles and 2 percent cobbles; slightly effervescent; mildly alkaline (pH 7.7); clear wavy boundary. (2 to 11 inches thick)
- Bk2—12 to 33 inches; dark grayish brown (10YR 4/2) extremely gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine to medium and common coarse roots; common fine tubular pores; few fine filaments and soft masses of lime; moderately thick lime coatings on rock fragments with thick pendants on the underside; 75 percent pebbles, 10 percent cobbles, and 2 percent stones; strongly effervescent; mildly alkaline (pH 7.8); clear wavy boundary. (10 to 30 inches thick)
- Bk3—33 to 60 inches; dark grayish brown (10YR 4/2) extremely gravelly loam, very dark grayish brown (10YR 3/2) moist; massive; slightly hard, friable, slightly sticky and nonplastic; common fine and medium and few very fine and coarse roots; many fine tubular and interstitial pores; common fine filaments and soft masses of lime; common thick lime pendants

on the underside of rock fragments with moderately thick coatings on the top; 60 percent pebbles, 20 percent cobbles, and 5 percent stones; strongly effervescent; moderately alkaline (pH 8.0).

Type location: White Pine County, Nevada; about 6 miles east of Lund, in the Egan Range, near Sawmill Canyon; about 2.6 miles east and 0.2 mile south of the northeast corner of sec. 13 in an unsectionalized area, T. 12 N., R. 62 E.; north latitude of 38 degrees, 53 minutes, 24 seconds; west longitude of 114 degrees, 53 minutes, 44 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from midsummer through midfall, moist from late fall through early summer

Soil temperature: 38 to 45 degrees F

Average summer soil temperature: 43 to 47 degrees F

Depth to the base of the mollic epipedon: 40 or more inches

Depth to the calcic horizon: 30 to 40 inches

Control section:

Clay content—20 to 27 percent

Content of rock fragments—average of 60 to 85 percent; 40 to 60 percent pebbles and 10 to 25 percent cobbles and stones

Calcium carbonate equivalent—40 to 50 percent in the fraction less than 20 mm in size

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Reaction—mildly alkaline or moderately alkaline

Bk horizon:

Value—4 to 6 dry, 3 or 4 moist

Chroma—2 or 3

Structure—subangular blocky or massive

Other features—secondary lime occurring as fine filaments and soft masses and as coatings and pendants on rock fragments

Hardzem Series

The Hardzem series consists of moderately deep, well drained soils that formed in residuum and colluvium derived from calcareous shale and limestone. These soils are on the side slopes of mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 25 inches, and the mean annual air temperature is about 41 degrees F.

Taxonomic class: Loamy-skeletal, mixed Typic Cryoboralfs

Typical pedon: Hardzem channery loam, in map unit 1430; in an area where pebbles cover about 5 percent of the surface:

Oi—1/4 inch to 0; partially decomposed needles and twigs. (0 to 2 inches thick)

A—0 to 1 inch; brown (10YR 5/3) channery loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine interstitial pores; 30 percent channers; mildly alkaline (pH 7.4); clear smooth boundary. (1 to 3 inches thick)

Bt1—1 to 8 inches; pink (7.5YR 7/4) very channery loam, brown (7.5YR 4/4) moist; moderate very fine subangular blocky structure; slightly hard, very friable, slightly sticky and plastic; common fine to coarse and many very fine roots; many very fine interstitial pores; few thin clay films on faces of peds; 35 percent channers; neutral (pH 7.2); clear wavy boundary. (5 to 12 inches thick)

Bt2—8 to 21 inches; brownish yellow (10YR 6/6) extremely channery clay loam, yellowish brown (10YR 5/6) moist; strong very fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine to coarse roots; common very fine interstitial pores; common thin clay films on faces of peds; 60 percent channers and 20 percent flagstones; mildly alkaline (pH 7.6); abrupt irregular boundary. (10 to 26 inches thick)

Cr—21 to 52 inches; highly fractured, soft shale; clear irregular boundary.

R—52 inches; hard, fractured, calcareous shale.

Type location: White Pine County, Nevada; about 2 miles northeast of Telegraph Peak; in an unsectionalized area about 2,600 feet north and 2,500 feet east of the projected southwest corner of sec. 5, T. 21 N., R. 63 E.; north latitude of 42 degrees, 30 minutes, 34 seconds; west longitude of 114 degrees, 52 minutes, 33 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from midsummer to late summer, moist from late fall through early summer

Soil temperature: 41 to 45 degrees F

Average summer soil temperature: 47 to 54 degrees F

Depth to the argillic horizon: 1 to 3 inches

Depth to weathered bedrock: 20 to 40 inches

Control section:

Clay content—20 to 30 percent

Content of rock fragments—45 to 80 percent, dominantly channers, but including 5 to 15 percent flagstones

Texture—very channery loam, extremely channery loam, extremely channery clay loam

O horizon:

Thickness—dominantly less than 1/2 inch; directly under trees, 0 to 2 inches

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Bt horizon:

Hue—10YR or 7.5YR

Value—6 or 7 dry, 4 or 5 moist

Chroma—4 to 6

Haunchee Series

The Haunchee series consists of shallow, well drained soils that formed in residuum derived from limestone and dolomite. These soils are on the side slopes of mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 16 inches, and the mean annual air temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic Cryic Lithic Rendolls

Typical pedon: Haunchee very cobbly loam, in map unit 1430; in an area where pebbles cover about 50 percent of the surface, cobbles cover 10 percent, and stones cover 10 percent:

A1—0 to 5 inches; dark grayish brown (10YR 4/2) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular and very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and medium roots; common very fine tubular pores; 30 percent pebbles and 20 percent cobbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (3 to 7 inches thick)

A2—5 to 16 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine to coarse roots; few very fine tubular pores; few thin lime coatings on the underside of rock fragments; 45 percent pebbles, 10 percent cobbles, and 5 percent stones; strongly effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (7 to 13 inches thick)

2R—16 inches; fractured limestone.

Type location: White Pine County, Nevada; about 5 miles northwest of Monte Neva Hot Springs, in the Egan Range; about 1,900 feet west and 750 feet south of the projected northeast corner of sec. 5, T. 21 N., R.

63 E.; north latitude of 39 degrees, 43 minutes, 23 seconds; west longitude of 114 degrees, 52 minutes, 19 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from midsummer through early fall, moist from midfall through early summer

Soil temperature: 42 to 46 degrees F

Average summer soil temperature: 55 to 59 degrees F

Depth to bedrock: 10 to 20 inches

Reaction: Mildly alkaline or moderately alkaline in the surface layer and moderately alkaline or strongly alkaline below the surface layer

Effervescence: Strongly effervescent or violently effervescent throughout the profile

Other features: In some pedons, a thin C horizon above the bedrock

Control section:

Clay content—10 to 20 percent

Texture—dominantly very gravelly very fine sandy loam or very gravelly loam; surface layer of very cobbly loam in some pedons

Content of rock fragments—35 to 60 percent, mainly pebbles; as much as 20 percent stones and cobbles in some pedons

Calcium carbonate equivalent—40 to 70 percent

A horizon:

Hue—10YR or 7.5YR

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Heist Series

The Heist series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on beach plains, fan skirts, inset fans, and the outer margins of lake plains. Slopes are 0 to 4 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Xeric Torriorthents

Typical pedon: Heist silt loam, in map unit 351:

A—0 to 3 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 4/3) moist; weak thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few fine roots; common very fine and fine vesicular pores; 10 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (2 to 5 inches thick)

C1—3 to 16 inches; very pale brown (10YR 7/3) fine sandy loam, yellowish brown (10YR 5/4) moist; weak

medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine and fine tubular pores; 5 percent pebbles; pebbles thinly coated with lime on the sides and bottom; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (10 to 20 inches thick)

C2—16 to 36 inches; very pale brown (10YR 7/3) fine sandy loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine to medium roots; few fine tubular pores; 5 percent pebbles; few lime films; pebbles thinly coated with lime; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary. (10 to 30 inches thick)

C3—36 to 60 inches; very pale brown (10YR 7/3) gravelly fine sandy loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine tubular pores; 30 percent pebbles; pebbles thinly coated with lime; violently effervescent; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; about 3.4 miles north of Ely; about 1,780 feet west and 950 feet north of the southeast corner of sec. 28, T. 17 N., R. 63 E.; north latitude of 39 degrees, 18 minutes, 19 seconds; west longitude of 114 degrees, 53 minutes, 9 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through spring, dry from summer through midfall

Soil temperature: 48 to 52 degrees F

Control section:

Texture—fine sandy loam, sandy loam, or gravelly sandy loam

Content of rock fragments—5 to 35 percent above a depth of 40 inches

A horizon:

Hue—7.5YR or 10YR

Value—5 to 7 dry, 3 to 5 moist; 5 dry and 3 moist only in the upper 4 inches

Chroma—2 to 4

Reaction—neutral to moderately alkaline

Effervescence—noneffervescent to violently effervescent

C horizon:

Hue—7.5YR or 10YR

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 to 4

Texture—below a depth of 40 inches, fine sandy loam

to gravelly loamy sand, gravelly sand, or very gravelly sand

Effervescence—strongly effervescent or violently effervescent

Reaction—mildly alkaline to strongly alkaline

Hessing Series

The Hessing series consists of very deep, well drained soils that formed in loess and silty alluvium over mixed alluvium. These soils are on beach plains and fan skirts. Slopes are 0 to 4 percent. The mean annual precipitation is about 7 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Typic Camborthids

Typical pedon: Hessing silt loam, in map unit 170; in an area where pebbles cover about 20 percent of the surface:

- A—0 to 4 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; moderate thick platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine vesicular pores; slightly effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (3 to 7 inches thick)
- Bw—4 to 15 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; moderately alkaline (pH 8.4); gradual smooth boundary. (6 to 20 inches thick)
- 2Bk1—15 to 23 inches; white (10YR 8/1) gravelly sandy loam, light brownish gray (10YR 6/2) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; few fine medium roots; few very fine tubular pores; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (4 to 14 inches thick)
- 2Bk2—23 to 31 inches; light gray (10YR 7/1) gravelly sandy loam, grayish brown (10YR 5/2) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; few very fine roots; few very fine tubular pores; 15 percent pebbles; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary. (4 to 16 inches thick)
- 3Bk3—31 to 60 inches; variegated, stratified extremely gravelly coarse sand and extremely gravelly sand; 2- to 5-inch lenses of fine sand mixed throughout; single grained; loose, nonsticky and nonplastic; few very fine

roots; 70 percent pebbles; violently effervescent; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; about 6 miles south of Barrel Springs, in Newark Valley; about 2,200 feet east and 2,900 feet south of the northwest corner of sec. 23, T. 19 N., R. 56 E.; north latitude of 39 degrees, 30 minutes, 2 seconds; west longitude of 115 degrees, 38 minutes, 6 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist for short periods in winter and spring, dry in summer and fall

Soil temperature: 47 to 53 degrees F

Depth to the base of the Bw horizon: 11 to 20 inches

Other features: As much as 50 percent thin, discontinuous, weakly silica cemented lenses and as much 20 percent weak durinodes in any horizon below a depth of 11 inches in some pedons

Control section:

Clay content—average of 8 to 18 percent

Content of rock fragments—average of 15 to 35 percent

Depth to the unconformable 2Bk horizon—15 to 25 inches

Depth to the unconformable 3Bk horizon—25 to 36 inches

A horizon:

Hue—2.5Y or 10YR

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3

Reaction—moderately alkaline or strongly alkaline

Other features—in some pedons, a slightly effervescent surface layer because of calcareous dust recharge

Bw horizon:

Hue—2.5Y or 10YR

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Texture—silt loam or silty clay loam

Structure—platy, prismatic, blocky, or massive

Consistence—slightly hard or hard, very friable or friable

2Bk horizon:

Texture—gravelly loam or gravelly sandy loam

Clay content—15 to 27 percent

Content of rock fragments—15 to 35 percent, mainly pebbles

Consistence—slightly plastic or plastic

Effervescence—slightly effervescent to violently effervescent

3Bk horizon:

Texture—stratified very gravelly loamy coarse sand to extremely gravelly coarse sand
 Content of rock fragments—50 to 70 percent, mainly pebbles
 Consistence—soft or loose, nonplastic or slightly plastic
 Reaction—mildly alkaline to strongly alkaline
 Effervescence—slightly effervescent to violently effervescent

Hunnton Series

The Hunnton series consists of well drained soils that are moderately deep over a duripan. These soils formed in alluvium derived from mixed rocks and in some loess and volcanic ash. They are on fan piedmont remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Xerollic Durargids

Typical pedon: Hunnton silt loam, in map unit 1090:

- A—0 to 4 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine vesicular pores; 2 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (2 to 5 inches thick)
- Bt1—4 to 10 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine to medium tubular pores; common thin clay films on faces of peds and lining pores; 2 percent pebbles; moderately alkaline (pH 7.9); clear smooth boundary. (8 to 16 inches thick)
- Bt2—10 to 22 inches; brown (7.5YR 5/4) clay, brown (7.5YR 4/4) moist; moderate medium prismatic structure parting to moderate medium angular blocky; hard, firm, sticky and plastic; few very fine and fine roots; common very fine to medium tubular pores; many thick clay films on faces of peds and coating rock fragments; 2 percent pebbles and 1 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary. (8 to 16 inches thick)
- Btk—22 to 28 inches; brown (7.5YR 5/4) clay, brown (7.5YR 4/4) moist; moderate medium prismatic structure parting to moderate medium angular blocky; hard, firm, sticky and plastic; few very fine and fine roots; common very fine to medium tubular pores;

many thick clay films on faces of peds and coating rock fragments; 5 percent pebbles and 1 percent cobbles; common thick, soft masses of lime; strongly effervescent; mildly alkaline (pH 7.8); abrupt smooth boundary. (4 to 5 inches thick)

Btqk—28 to 35 inches; very pale brown (10YR 7/3) clay, brownish yellow (10YR 6/6) moist; weak fine subangular blocky structure; hard, firm, sticky and plastic; few very fine and fine roots; few very fine to medium tubular pores; few or common thin clay films on faces of peds and coating rock fragments; 5 percent pebbles and 1 percent cobbles; common thick masses of lime; irregularly shaped silica concretions; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary. (0 to 8 inches thick)

Bqkm—35 to 40 inches; very pale brown (10YR 7/3), indurated duripan; massive; extremely hard, extremely firm silica-lime cemented; thin laminar cap; violently effervescent.

Type location: White Pine County, Nevada; about 10 miles north of Cold Creek Ranch, in Huntington Valley; about 2,500 feet west and 1,000 feet south of the northeast corner of sec. 10, T. 24 N., R. 55 E.; north latitude of 39 degrees, 58 minutes, 40 seconds; west longitude of 115 degrees, 45 minutes, 36 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from midfall through spring, dry from summer through early fall

Soil temperature: 47 to 52 degrees F

Depth to a duripan: 20 to 40 inches

Depth to lime: 19 to 32 inches

Other features: In some pedons, a continuously or discontinuously weakly silica cemented Bqk horizon, 4 to 8 inches thick, above the duripan

Control section:

Clay content—average of 45 to 55 percent

Content of rock fragments—average of 5 to 25 percent

A horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3

Reaction—neutral to moderately alkaline

Bt horizon:

Hue—10YR or 7.5YR

Value—5 to 7 dry, 3 to 5 moist

Chroma—3 or 4

Texture—clay or gravelly clay

Clay content—45 to 55 percent
 Content of rock fragments—as much as 25 percent, mainly pebbles
 Structure—weak or moderate, very fine to medium subangular or angular blocky or prismatic
 Reaction—neutral to moderately alkaline
 Effervescence—noneffervescent in the upper subhorizons, noneffervescent to strongly effervescent in the lower subhorizons
 Other features—in some pedons, a 4- to 7-inch Bt1 horizon of loam or clay loam with thin clay films; in some pedons, masses of lime and silica concretions in the lower part

Bqkm horizon:

Value—7 or 8 dry, 4 to 7 moist
 Chroma—2 or 3 dry, 3 or 4 moist
 Structure—massive or weak medium to very thick platy
 Other features—in some pedons, strongly silica cemented horizons with 40 to 60 percent pebbles below the indurated duripan

2Cqk horizon (if it occurs):

Value—6 to 8 dry, 4 to 7 moist
 Chroma—2 to 4 dry, 3 or 4 moist
 Texture—very gravelly sandy loam, very gravelly loamy sand, or extremely gravelly loamy sand
 Clay content—2 to 10 percent
 Content of rock fragments—40 to 70 percent, mostly pebbles
 Reaction—moderately alkaline or strongly alkaline
 Cementation—discontinuously or continuously weakly silica cemented, commonly with discontinuous silica laminae $\frac{1}{2}$ to 1 millimeter thick; in some pedons, as much as 40 percent strong discontinuous silica cementation

Hutchley Series

The Hutchley series consists of shallow, well drained soils that formed in residuum derived from quartzite, andesite, or conglomerate. These soils are on cuestas, mountainsides, and ridges. Slopes are 8 to 50 percent. The average annual temperature is about 43 degrees F, and the average annual precipitation is about 14 inches.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Hutchley very gravelly loam, in map unit 567; in an area where pebbles cover about 45 percent of the surface, cobbles cover 15 percent, and stones cover 20 percent:

A—0 to 3 inches; dark grayish brown (10YR 4/2) very

gravelly loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common fine and medium roots; common fine and medium tubular pores; 40 percent pebbles and 5 percent cobbles; neutral (pH 7.2); clear smooth boundary. (2 to 7 inches thick)

Bt—3 to 12 inches; brown (10YR 5/3) very gravelly clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; very hard, friable, sticky and plastic; common fine and medium roots; few fine and medium tubular pores; common distinct clay films on faces of peds; 40 percent pebbles and 15 percent cobbles; neutral (pH 7.2); abrupt wavy. (8 to 13 inches thick)

R—12 inches; fractured andesite.

Type location: White Pine County, Nevada; about 4 miles east of Robinson Summit, in the Egan Range; about 3,000 feet east and 2,300 feet north of the southwest corner of sec. 21, T. 18 N., R. 62 E.; north latitude of 39 degrees, 24 minutes, 46 seconds; west longitude of 114 degrees, 59 minutes, 59 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from mid summer through early fall, moist from midfall through early summer

Average annual soil temperature: 42 to 47 degrees F

Mollic epipedon: 10 to 20 inches thick

Depth to bedrock: 10 to 20 inches

Reaction: Neutral or mildly alkaline

Control section:

Clay content—24 to 35 percent

Content of rock fragments—45 to 70 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Bt horizon:

Value—4 or 5 dry

Clay content—28 to 35 percent

Content of rock fragments—15 to 50 percent pebbles and 5 to 45 percent cobbles

Texture—very cobbly clay loam, very gravelly clay loam, or extremely flaggy clay loam

Hyzen Series

The Hyzen series consists of shallow and very shallow, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on hills and mountains. Slopes are

15 to 75 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, frigid Lithic Haploxerolls

Typical pedon: Hyzen extremely stony loam, in map unit 109; in an area where pebbles cover about 45 percent of the surface, cobbles cover 10 percent, and stones cover 20 percent:

A1—0 to 2 inches, grayish brown (10YR 5/2) extremely stony loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine to medium roots; few very fine and fine vesicular and interstitial pores; common thin lime pendants on the underside of rock fragments; 40 percent pebbles, 10 percent cobbles, and 15 percent stones; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (1 to 4 inches thick)

A2—2 to 12 inches, brown (10YR 5/3) extremely stony loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, friable, sticky and plastic; many fine to coarse roots; common fine and medium tubular pores; common thin lime pendants on the underside of rock fragments; 25 percent pebbles, 20 percent cobbles, and 20 percent stones; violently effervescent; moderately alkaline (pH 8.4); abrupt irregular boundary. (4 to 12 inches thick)

R—12 inches; gray (10YR 6/1), fractured limestone; fractures partly filled with lime; few coarse roots in fractures.

Type location: White Pine County, Nevada; on Squaw Peak; about 2,480 feet west and 2,800 feet south of the projected northeast corner of sec. 8, T. 16 N., R. 63 E.; north latitude of 30 degrees, 16 minutes, 1 second; west longitude of 114 degrees, 54 minutes, 27 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from late summer through fall, moist from winter through early summer

Soil temperature: 42 to 47 degrees F

Mollic epipedon: 6 to 14 inches thick

Depth to bedrock: 6 to 14 inches

Control section:

Clay content—average of 10 to 18 percent

Content of rock fragments—60 to 85 percent, mostly cobbles and stones

Calcium carbonate equivalent—40 to 60 percent in the fraction less than 20 mm in size

A horizon:

Value—4 or 5 dry

Chroma—2 or 3

Ilton Series

The Ilton series consists of moderately deep, well drained soils that formed in mixed alluvium over soft, tuffaceous sandstone. These soils are on fan piedmont remnants that have a rock core. Slopes are 4 to 30 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Durixerollic Calciorthids

Typical pedon: Ilton gravelly sandy loam, in map unit 1810:

A1—0 to 1 inch; pale brown (10YR 6/3) gravelly sandy loam, brown (10YR 4/3) moist; weak thin platy structure; soft, very friable, nonsticky and nonplastic; common very fine and few fine roots; common very fine and fine vesicular pores; 25 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (1 to 3 inches thick)

A2—1 to 4 inches; pale brown (10YR 6/3) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine to medium vesicular and tubular pores; 20 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (2 to 4 inches thick)

Bk—4 to 10 inches; very pale brown (10YR 7/4) gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine and fine interstitial and tubular pores; 20 percent pebbles and 10 percent cobbles; many hard, fine calcium carbonate fragments that absorb moisture easily; many thin lime pendants and soft coatings on rock fragments; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (4 to 8 inches thick)

Bqk1—10 to 24 inches; very pale brown (10YR 7/4) gravelly sandy loam, brownish yellow (10YR 6/6) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common very fine and fine interstitial and tubular pores; 25 percent pebbles and 5 percent cobbles; few weak durinodes, 1 to 3 inches in diameter, that have brownish silica stains; few layers, 1 to 2 inches thick, that are hard

when dry and that have more lime than the soil mass; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (10 to 20 inches thick)

Bqk2—24 to 36 inches; pale yellow (2.5Y 8/4) gravelly sandy loam, light yellowish brown (2.5Y 6/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; 60 percent weakly cemented; 40 percent discontinuously strongly silica cemented; hard, very firm, and brittle; few roots; 15 percent pebbles; strongly effervescent, except for the noncalcareous, strongly cemented material; moderately alkaline (pH 8.4); gradual smooth boundary. (8 to 16 inches thick)

Cr—36 to 60 inches; very pale brown (10YR 7/3), soft, platy, tuffaceous sandstone, yellowish brown (10YR 5/4) moist; few seams of calcium carbonate; few roots in fractures; 15 percent pebbles embedded in the sandstone; violently effervescent; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; Duckwater Planning Unit Survey Area 2; 0.2 mile west and 0.55 mile south of the northeast corner of sec. 12, T. 15 N., R. 55 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through midspring, dry from late spring through midfall

Soil temperature: 47 to 52 degrees F

Depth to paralithic contact: 32 to 40 inches

Depth to weak cementation: 21 to 28 inches

Depth to the calcic horizon: 3 to 6 inches

Control section:

Clay content—10 to 18 percent

Content of rock fragments—15 to 35 percent, mostly pebbles

A horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 to 4

Bk horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 to 4

Bqk horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 6 or 7 moist

Chroma—2 to 4

Cementation—in some pedons, subhorizons with 20 to 60 percent discontinuous weak and 10 to 40

percent discontinuous strong cementation and as much as 30 percent durinodes

Izar Series

The Izar series consists of shallow and very shallow, somewhat excessively drained soils that formed in residuum and colluvium derived from sandstone. These soils are on hills and fan piedmont remnants that have a rock core and on rock pediment remnants. Slopes are 2 to 50 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Loamy-skeletal, mixed (calcareous), mesic Lithic Xeric Torriorthents

Typical pedon: Izar very gravelly loam, in map unit 633; in an area where pebbles cover about 30 percent of the surface, cobbles cover 10 percent, and stones cover 10 percent:

A—0 to 3 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; weak thin platy structure; slightly hard, friable, sticky and slightly plastic; few fine roots; few fine vesicular pores; 25 percent pebbles and 10 percent cobbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (1 to 4 inches thick)

Bk1—3 to 9 inches; pale brown (10YR 6/3) very gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine to coarse roots; common very fine and fine tubular pores; common thin lime coatings on the underside of rock fragments; 35 percent pebbles and 10 percent cobbles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 8 inches thick)

Bk2—9 to 14 inches; pale brown (10YR 6/3) very gravelly loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine tubular pores; common thin lime coatings on the underside of rock fragments; 30 percent pebbles and 10 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (3 to 5 inches thick)

2R—14 inches; fractured sandstone; thin lime coatings in fractures.

Type location: White Pine County, Nevada; about 48 miles northwest of Ely; about 1,850 feet east and 250

feet north of the southwest corner of sec. 3, T. 20 N., R. 56 E.; north latitude of 39 degrees, 37 minutes, 35 seconds; west longitude of 115 degrees, 30 minutes, 25 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through early spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Depth to bedrock: 7 to 14 inches

Reaction: Mildly alkaline or moderately alkaline

Calcium carbonate equivalent: 5 to 35 percent

Other features: Commonly, silica and lime pan fragments on as much as 75 percent of the surface area

Control section:

Clay content—18 to 25 percent

Content of rock fragments—40 to 75 percent, mainly pebbles

A horizon:

Hue—2.5Y or 10YR

Value—4 or 5 moist

Chroma—2 or 3

Bk horizon:

Hue—2.5Y or 10YR

Value—6 to 8 dry, 4 or 5 moist

Chroma—2 to 4

Lime coatings—none to common on the underside of pebbles

Katelana Series

The Katelana series consists of very deep, well drained soils that formed in alluvium derived from limestone over lacustrine sediments. These soils are on lake plains, lagoons, alluvial flats, and fan skirts. Slopes are 0 to 4 percent. The mean annual precipitation is about 7 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Fine-silty, carbonatic, mesic Typic Torriorthents

Typical pedon: Katelana silt loam, in map unit 250:

A—0 to 2 inches; white (10YR 8/2) silt loam, pale brown (10YR 6/3) moist; strong very coarse prismatic structure parting to strong medium and thick platy; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine vesicular and few fine tubular pores; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary. (2 to 4 inches thick)

Cn1—2 to 12 inches; light gray (10YR 7/2) silt loam, light brownish gray (10YR 6/2) moist; strong very coarse prismatic structure; slightly hard, friable, slightly sticky and plastic; common very fine roots; common very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary. (8 to 14 inches thick)

Cn2—12 to 19 inches; light gray (10YR 7/2) silt loam, light brownish gray (10YR 6/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and plastic; many very fine and fine and few medium roots; common very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary. (5 to 9 inches thick)

Cn3—19 to 26 inches; light gray (2.5Y 7/2) silt loam, light brownish gray (2.5Y 6/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and plastic; common very fine and fine and few medium roots; common very fine and fine and few medium tubular pores; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (5 to 9 inches thick)

Cn4—26 to 32 inches; light gray (2.5Y 7/2) silt loam, light brownish gray (2.5Y 6/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and plastic; few very fine roots; common very fine and few fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (0 to 8 inches thick)

2Ckyz—32 to 62 inches; light gray (2.5Y 7/2) silty clay loam, light brownish gray (2.5Y 6/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, sticky and plastic; few very fine roots; few very fine and fine tubular pores; common (5 percent) salt masses as seams and threads; few (1 percent) lime threads on faces of peds and within peds; few (1 percent) gypsum crystals throughout the horizon; common (10 percent) olive gray (5Y 5/2) distinct medium relict mottles; violently effervescent; strongly alkaline (pH 8.5); abrupt smooth boundary. (15 to 30 inches thick)

3Cyz—62 to 75 inches; olive (5Y 5/4) silty clay, olive (5Y 4/4) moist; moderate fine and medium subangular blocky structure; soft, very friable, sticky and plastic; common (8 percent) salt masses as seams and threads throughout the horizon; common (10 percent) gypsum crystals as segregated masses; common (15 percent) olive gray (5Y 5/2) distinct medium relict mottles; violently effervescent; strongly alkaline (pH 8.5).

Type location: White Pine County, Nevada; about 1,000 feet south and 200 feet west of the northeast corner of sec. 13, T. 22 N., R. 58 E.; north latitude of 39

degrees, 40 minutes, 00 seconds; west longitude of 115 degrees, 25 minutes, 30 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from summer through midfall

Soil temperature: 47 to 53 degrees F

Depth to lake sediments: 30 to 40 inches

Electrical conductivity: 4 to 8 millimhos per cubic centimeter in the A and Cn horizons and 16 to 30 millimhos per cubic centimeter below the Cn horizon

Control section:

Clay content—18 to 27 percent, when mixed
Calcium carbonate equivalent—40 to 60 percent

A horizon:

Hue—2.5Y or 10YR
Value—7 or 8 dry, 6 or 7 moist
Chroma—2 or 3

Cn horizon:

Hue—2.5Y or 10YR
Value—6 or 7 dry, 5 or 6 moist
Chroma—2 or 3 dry or moist
Texture—silt loam with thin strata of loam or silty clay loam common in some pedons

2Ckyz horizon:

Value—6 or 7 dry, 5 or 6 moist
Chroma—2 to 4
Texture—stratified silty clay loam to clay loam
Clay content—27 to 40 percent
Secondary carbonates—1 to 2 percent fine lime threads within peds and on faces of peds
Gypsum—1 to 2 percent fine gypsum crystals occurring as segregated masses
Salt—2 to 15 percent salt masses occurring as seams and threads

3Cyz horizon:

Texture—stratified silty clay to clay
Clay content—40 to 50 percent
Other features—2 to 20 percent, by volume, segregated gypsum crystals; 2 to 15 percent salt masses occurring as seams or threads

Kelk Series

The Kelk series consists of very deep, well drained soils that formed in loess having some volcanic ash and in mixed silty alluvium. These soils are on inset fans and axial-stream flood plains. Slopes are 0 to 8 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is 48 about degrees F.

Taxonomic class: Fine-silty, mixed, mesic Durixerollic Camborthids

Typical pedon: Kelk very fine sandy loam, in map unit 1020:

A—0 to 4 inches; light gray (10YR 7/2) very fine sandy loam, brown (10YR 5/3) moist; moderate thin and medium platy structure; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.2); gradual smooth boundary. (2 to 8 inches thick)

Bw—4 to 10 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common fine interstitial and tubular pores; slightly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (6 to 28 inches thick)

Bqk1—10 to 18 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; few fine to coarse roots; common fine tubular pores; 40 percent fine durinodes; common fine, soft lime filaments; strongly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (4 to 12 inches thick)

Bqk2—18 to 32 inches; very pale brown (10YR 7/3), continuously weakly silica cemented silt loam, yellowish brown (10YR 5/4) moist; massive; hard, firm, sticky and plastic; few fine and medium roots; few fine tubular pores; common fine, soft lime filaments; violently effervescent; moderately alkaline (pH 8.4); gradual smooth boundary. (6 to 24 inches thick)

Bqk3—32 to 60 inches; very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, firm, sticky and plastic; few fine roots; few fine and medium tubular pores; 10 percent fine durinodes; common fine, soft lime filaments; violently effervescent; strongly alkaline (pH 9.0).

Type location: White Pine County, Nevada; about 1 mile south of the Elko County line and 1/2 mile east of Road 46; about 2,600 feet west and 400 feet south of the northeast corner of sec. 27, T. 26 N., R. 55 E., Mount Diablo meridian; north latitude of 40 degrees, 6 minutes, 48 seconds; west longitude of 115 degrees, 15 minutes, 50 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from early June through October

Soil temperature: 47 to 52 degrees F

Depth to the base of the Bw horizon: 10 to 35 inches
Depth to continuous weak silica cementation: 13 to 35 inches

Depth to carbonates: 10 to 35 inches

Other features: In most pedons, slightly or moderately salt affected below a depth of 24 to 48 inches

Control section:

Clay content—18 to 27 percent

A horizon:

Hue—10YR or 2.5Y

Value—5 to 7 dry, 3 or 4 moist

Chroma—2 or 3

Reaction—neutral to moderately alkaline

Effervescence—noneffervescent or slightly effervescent

Bw horizon:

Value—6 or 7 dry, 3 or 4 moist

Chroma—2 or 3

Structure—blocky, prismatic, or massive

Consistence—very friable or friable, slightly sticky or sticky and slightly plastic or plastic

Reaction—neutral to moderately alkaline; strongly alkaline where salt and sodium affected

Effervescence—noneffervescent or slightly effervescent

Other features—10 to 20 percent weak durinodes near the lower horizon boundary in some pedons

Bq and Bqk horizons:

Value—6 to 8 dry, 3 to 6 moist

Chroma—2 to 4

Texture—dominantly silt loam that, in some pedons, has thin strata of silty clay loam below a depth of 30 inches

Structure—subangular blocky or massive

Consistence—very friable to firm, slightly sticky or sticky and slightly plastic or plastic

Reaction—neutral to strongly alkaline, increasing in alkalinity with increasing depth

Effervescence—slightly effervescent to violently effervescent in the Bqk horizon

Cementation—in subhorizons that are not continuously silica cemented, 30 to 90 percent durinodes or 20 to 50 percent discontinuous weak silica cementation

Other features: In some pedons, relict mottles in the lower part of the Bqk horizon; in some pedons, lenses with 5 to 15 percent pebbles in some Bqk subhorizon or an extremely gravelly substratum below a depth of 42 inches; in some pedons, a 2Bk horizon of silty clay loam below a depth of 39 inches

Kolda Series

The Kolda series consists of very deep, very poorly drained soils that formed in mixed alluvium over lacustrine sediments. These soils are on lake plains adjacent to springs and seeps. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Typic Haplaquolls

Typical pedon: Kolda silt loam, in map unit 541:

A1—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, black (10YR 2/1) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine to medium roots; common very fine continuous tubular pores; very strongly alkaline (pH 9.2); clear wavy boundary. (4 to 6 inches thick)

A2—6 to 22 inches; very dark grayish brown (10YR 3/2) silt loam, black (10YR 2/1) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine continuous tubular pores; strongly effervescent; very strongly alkaline (pH 9.4); gradual irregular boundary. (12 to 17 inches thick)

2Ckg1—22 to 39 inches; light gray (5Y 7/1) clay, light olive gray (5Y 6/2) moist; moderate medium prismatic structure parting to fine angular blocky; hard, firm, very sticky and very plastic; common fine and medium roots; common fine tubular pores; few fine distinct light yellowish brown mottles; common thick very dark grayish brown fingers of silt loam in the upper 8 inches; few lime films; violently effervescent; strongly alkaline (pH 9.0); gradual wavy boundary. (12 to 20 inches thick)

2Ckg2—39 to 60 inches; light gray (5Y 7/1) clay, grayish brown (2.5Y 5/2) moist; moderate medium prismatic structure; hard, firm, very sticky and very plastic; few fine roots; few very fine continuous tubular pores; violently effervescent; strongly alkaline (pH 9.2).

Type location: White Pine County, Nevada; about 1 mile west of Warm Springs Ranch, in the Newark Valley; about 1,200 feet east and 500 feet north of the southwest corner of sec. 35, T. 23 N., R. 56 E.; north latitude of 115 degrees, 48 minutes, 55 seconds; west longitude of 39 degrees, 48 minutes, 55 seconds

Range in Characteristics

Soil moisture: Moist from October through July in most

years, dry in the upper part of the profile from August through September

Soil temperature: 47 to 52 degrees F

Mollic epipedon: 10 to 23 inches thick

Reaction: Strongly alkaline or very strongly alkaline

Control section:

Clay content—average of 35 to 50 percent

Texture—silt loam in the upper part and clay or silty clay in the lower part

A horizon:

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 or 3 dry, 1 to 3 moist

2Ckg1 horizon:

Value—7 or 8 dry, 5 to 7 moist

Chroma—1 or 2 dry and moist

2Ckg2 horizon:

Hue—2.5Y or 5Y dry, 2.5Y moist

Value—7 or 8 dry, 5 to 7 moist

Chroma—1 or 2 dry and moist

Structure—moderate very fine angular blocky to medium prismatic

Kunzler Series

The Kunzler series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on stream terraces, fan piedmont remnants, and inset fans. Slopes are 0 to 4 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Durixerollic Calciorthids

Typical pedon: Kunzler loam, in map unit 1120; in an area where pebbles cover about 5 percent of the surface:

A1—0 to 2 inches; light brownish gray (10YR 6/2) loam, dark brown (10YR 3/3) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine vesicular pores; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (1 to 6 inches thick)

A2—2 to 10 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine and fine tubular pores; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (2 to 29 inches thick)

Bqk1—10 to 26 inches; white (10YR 8/2), continuously weakly lime and silica cemented loam, pale brown (10YR 6/3) moist; pinkish gray (7.5YR 7/2) coatings on faces of peds, brown (7.5YR 5/4) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; few very fine roots; common very fine tubular pores; 30 percent durinodes; violently effervescent; very strongly alkaline (pH 9.6); clear wavy boundary. (5 to 17 inches thick)

Bqk2—26 to 37 inches; variegated white (10YR 8/2) and pale brown (10YR 6/3), continuously weakly lime and silica cemented fine sandy loam, very pale brown (10YR 7/3) and brown (10YR 5/3) moist; weak thick platy structure; hard, firm, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; strongly effervescent; very strongly alkaline (pH 9.4); clear wavy boundary. (10 to 20 inches thick)

Bqk3—37 to 60 inches; variegated light gray (10YR 7/2), pale brown (10YR 6/3), and light reddish brown (5YR 6/3), continuously weakly lime and silica cemented sandy loam, pale brown (10YR 6/3), brown (10YR 5/3), and reddish brown (5YR 4/4) moist; massive; hard, brittle, slightly sticky and slightly plastic; few very fine tubular pores; 15 percent durinodes; strongly effervescent; very strongly alkaline; (pH 9.2).

Type location: White Pine County, Nevada; about 8 miles southwest of Lund; about 1,800 feet east and 2,800 feet south of the projected northwest corner of sec. 2, T. 10 N., R. 61 E.; north latitude of 38 degrees, 45 minutes, 17 seconds; west longitude of 115 degrees, 5 minutes, 26 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 50 to 53 degrees F

Depth to the calcic horizon: 10 to 35 inches

Control section:

Clay content—10 to 18 percent

Content of rock fragments—0 to 15 percent pebbles

A horizon:

Value—5 or 6 dry, 3 to 5 moist

Chroma—2 to 4

Reaction—moderately alkaline or strongly alkaline

Carbonates—slightly or moderately calcareous

B horizon:

Hue—7.5YR or 10YR

Value—6 to 8 dry, 4 to 7 moist

Chroma—2 to 4

Texture—loam, fine sandy loam, or sandy loam

Content of rock fragments—0 to 15 percent
 Structure—subangular blocky, platy, or massive
 Consistence—slightly hard or hard, very friable to firm
 Durinodes—0 to 30 percent, 20 percent or more in some part above a depth of 40 inches
 Exchangeable sodium percentage (ESP)—increasing with increasing depth, more than 40 percent in some part of the horizon
 Reaction—moderately alkaline to very strongly alkaline
 Other features—in some pedons, a B horizon that is weakly lime cemented

Kyler Series

The Kyler series consists of shallow and very shallow, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on mountains and hills. Slopes are 15 to 75 percent. The mean annual precipitation is about 12 inches, and the mean annual air temperature is about 50 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic Lithic Xeric Torriorthents

Typical pedon: Kyler extremely cobbly loam, in map unit 650; in an area where pebbles cover about 40 percent of the surface, cobbles cover 30 percent, and stones cover 2 percent:

A—0 to 3 inches; pale brown (10YR 6/3) extremely cobbly loam, brown (10YR 4/3) moist; weak very fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine interstitial pores; 45 percent pebbles and 30 percent cobbles; violently effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary. (3 to 8 inches thick)

C—3 to 9 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; moderate very fine and fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine to coarse roots; common very fine and fine tubular pores; 35 percent pebbles and 15 percent cobbles; thin lime coatings on pebbles near the bedrock; violently effervescent; moderately alkaline (pH 8.0); abrupt wavy boundary. (3 to 10 inches thick)

R—9 inches; limestone with a discontinuous lime coating.

Type location: White Pine County, Nevada; about 5.7 miles northwest of Bull Creek Ranch; about 2,475 feet west and 400 feet south of the northeast corner of sec. 6, T. 14 N., R. 56 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall, except for 10 to 20 cumulative days between July and October because of convection storms

Soil temperature: 53 to 59 degrees F

Effervescence: Strongly effervescent to violently effervescent

Depth to bedrock: 6 to 14 inches

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Control section:

Clay content—7 to 18 percent

Content of rock fragments—average of 35 to 60 percent

Calcium carbonate equivalent—more than 40 percent in the fraction less than 20 mm in size

A horizon:

Value—6 or 7 dry, 3 to 5 moist

Chroma—2 or 3

C horizon:

Hue—10YR or 7.5YR

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4 moist

Texture—loam that has strata of fine sandy loam, very fine sandy loam, or silt loam

Structure—massive or subangular blocky

Consistence—slightly sticky or sticky and slightly plastic or plastic

Content of rock fragments—average of 35 to 60 percent; subhorizons with as much as 70 percent rock fragments in some pedons

Other features: A Bk horizon in some pedons; thin lime coatings on rock fragments in some pedons

Linoyer Series

The Linoyer series consists of very deep, well drained soils that formed in colluvium and alluvium derived from limestone, sandstone, and tuff. These soils are on alluvial flats, fan skirts, and inset fans. Slopes are 0 to 4 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Coarse-silty, mixed (calcareous), mesic Xeric Torriorthents

Typical pedon: Linoyer very fine sandy loam, in map unit 455:

A—0 to 4 inches; pale brown (10YR 6/3) very fine sandy

loam, brown (10YR 4/3) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; common fine and medium roots; many fine vesicular pores; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (4 to 11 inches thick)

C1—4 to 15 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak coarse prismatic structure parting to weak fine subangular blocky; soft, very friable, slightly sticky and slightly plastic; common fine and medium roots; common fine tubular pores; strongly effervescent; moderately alkaline (pH 8.2); gradual smooth boundary. (9 to 12 inches thick)

C2—15 to 60 inches; very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; weak coarse prismatic structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; strongly effervescent; moderately alkaline (pH 8.2).

Type location: White Pine County, Nevada; in Steptoe Valley, about 17 miles southeast of Ely; about 700 feet east and 1,000 feet north of the southwest corner of sec. 36, T. 14 N., R. 64 E.; north latitude of 39 degrees, 1 minute, 48 seconds; west longitude of 114 degrees, 3 minutes, 26 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from late summer through fall, moist in winter and spring

Soil temperature: 47 to 54 degrees F

Reaction: Moderately alkaline or strongly alkaline throughout the profile

A horizon:

Hue—10YR or 7.5YR

Value—5 to 7 dry, 4 or 5 moist

Chroma—2 to 4

C horizon:

Hue—10YR, 7.5YR, or 5YR

Value—6 or 7 dry, 4 to 6 moist

Chroma—3 to 6

Texture—very fine sandy loam or silt loam with less than 15 percent sand coarser than very fine sand

Clay content—12 to 18 percent

Structure—subangular blocky, prismatic, or massive

Consistence—soft or slightly hard, very friable or friable

Calcium carbonate equivalent—10 to 40 percent

Maderbak Series

The Maderbak series consists of moderately deep, well drained soils that formed in residuum and colluvium

derived from andesite. These soils are on the side slopes of mountains. Slopes are 8 to 75 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 50 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Xerollic Haplargids

Typical pedon: Maderbak very gravelly clay loam, in map unit 276; in an area where pebbles cover about 25 percent of the surface, cobbles cover 15 percent, and stones cover 15 percent:

A—0 to 3 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; soft, very friable, sticky and plastic; few very fine and fine roots; common fine and medium vesicular pores; 40 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.8); clear smooth boundary. (3 to 6 inches thick)

Bt1—3 to 9 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 3/4) moist; moderate fine and medium angular blocky structure; slightly hard, firm, sticky and plastic; common very fine to medium roots; common fine and medium tubular pores; common moderately thick clay films on faces of peds and bridging sand grains; 50 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.8); gradual smooth boundary. (4 to 7 inches thick)

Bt2—9 to 17 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 3/4) moist; moderate fine and medium angular blocky structure; slightly hard, firm, sticky and plastic; few very fine and fine roots; few fine tubular pores; common moderately thick clay films on faces of peds and bridging sand grains; 50 percent pebbles and 5 percent cobbles; moderately alkaline (pH 8.0); clear smooth boundary. (5 to 11 inches thick)

Bk—17 to 29 inches; light yellowish brown (10YR 6/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium angular blocky structure; slightly hard, firm, sticky and plastic; few very fine and fine roots; few fine and medium tubular pores; few fine faint clay films lining pores; common thin, soft lime filaments and masses; common thin lime coatings on all surfaces of pebbles; 45 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (10 to 17 inches thick)

R—29 inches; hard, andesitic bedrock.

Type location: White Pine County, Nevada; about 3 miles south of Gardner Ranch; 750 feet south and 700 feet east of the northwest corner of sec. 25, T. 13 N., R. 60 E.; north latitude of 39 degrees, 57 minutes, 55

seconds; west longitude of 115 degrees, 10 minutes, 15 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall, except for 10 to 20 cumulative days between July and October because of convection storms

Soil temperature: 52 to 59 degrees F

Depth to bedrock: 20 to 40 inches

Depth to the argillic horizon: 3 to 6 inches

Control section:

Clay content—35 to 50 percent

Texture—average of very gravelly clay or very gravelly clay loam

Content of rock fragments—35 to 60, dominantly pebbles

A horizon:

Value—4 or 5 dry or moist

Chroma—2 to 4 dry or moist

Bt horizon:

Hue—10YR or 7.5YR

Value—5 or 6 dry, 3 to 5 moist

Chroma—3 or 4

Texture—very gravelly clay loam or very gravelly clay

Clay content—35 to 50 percent

Content of rock fragments—35 to 60 percent, dominantly pebbles

Structure—subangular or angular blocky

Reaction—mildly alkaline or moderately alkaline

Bk horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—4 to 6

Texture—very gravelly clay loam, very gravelly silty clay, or very gravelly clay

Reaction—moderately alkaline or strongly alkaline

Secondary carbonates—many thin to thick lime threads and moderately thick or thick lime pendants on the underside of rock fragments

McConnel Series

The McConnel series consists of very deep, somewhat excessively drained soils that formed in mixed alluvium over lacustrine beach sediments. These soils are on offshore bars. Slopes are 2 to 8 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Xerollic Camborthids

Typical pedon: McConnel gravelly fine sandy loam, in map unit 1494; in an area where pebbles cover about 70 percent of the surface:

A—0 to 3 inches; grayish brown (10YR 5/2) gravelly fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate medium or thick platy structure; slightly hard, friable, nonsticky and nonplastic; few very fine to coarse roots; many very fine to coarse vesicular pores; 15 percent pebbles; moderately alkaline (pH 8.0); abrupt smooth boundary. (1 to 5 inches thick)

Bw—3 to 11 inches; brown (10YR 5/3) sandy loam, dark grayish brown (10YR 4/2) moist; moderate fine to coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine to medium and common coarse roots; many very fine to medium tubular pores; 10 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (6 to 15 inches thick)

2Bk1—11 to 17 inches; grayish brown (10YR 5/2) very gravelly loamy coarse sand, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine to medium and few coarse roots; common fine to coarse interstitial pores; few fine, soft masses of lime; thin lime coatings on the underside of rock fragments; 45 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (4 to 7 inches thick)

3Bk2—17 to 36 inches; light gray (10YR 6/1) extremely gravelly coarse sand, dark gray (10YR 4/1) moist; single grained; loose, nonsticky and nonplastic; few very fine to coarse roots; many very fine to coarse interstitial pores; few fine, soft masses of lime; thin lime coatings on the underside of rock fragments; 65 percent pebbles; moderately alkaline (pH 8.4); abrupt smooth boundary. (14 to 19 inches thick)

4Bk3—36 to 42 inches; light gray (10YR 7/2) very gravelly sandy loam, pale brown (10YR 6/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots; few very fine interstitial pores; 35 percent pebbles; moderately alkaline (pH 8.4); gradual wavy boundary. (0 to 6 inches thick)

5C—42 to 60 inches; light gray (10YR 7/2) sandy loam, grayish brown (10YR 5/2) moist; few fine distinct yellow (10YR 7/6) mottles; massive; hard, friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; few fine, soft masses of lime; few thin lenses of gravelly fine sandy loam; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 3,000 feet east and 1,100 feet south of the northwest corner of sec. 28, T. 25 N., R. 61 E.; north latitude of 40

degrees, 00 minutes, 53 seconds; west longitude of 115 degrees, 4 minutes, 39 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees; moist in winter and spring, dry in summer and fall

Soil temperature: 50 to 54 degrees F

Depth to the 2Bk1 horizon: 10 to 20 inches

Control section:

Clay content—average of as much as 5 percent

Content of rock fragments—average of 50 to 80 percent, mainly pebbles

A horizon:

Hue—10YR or 2.5Y

Value—5 or 6 dry, 3 or 4 moist; 5 dry and 3 moist only in the upper 3 inches

Chroma—1 to 3

Reaction—neutral to moderately alkaline

Bw horizon:

Hue—10YR or 2.5Y

Value—5 to 7 dry, 3 to 5 moist

Chroma—2 to 4; 1 if dark sand grains are present

Texture—loam, sandy loam, or fine sandy loam

Structure—very fine to medium granular or subangular blocky or massive

Reaction—neutral to moderately alkaline

Bk and C horizons:

Hue—10YR or 2.5Y

Value—5 to 7 dry, 3 to 6 moist

Chroma—2 to 4; 1 if dark sand grains are present

Structure—single grained or massive; subangular blocky in subhorizons in some pedons

Consistence—loose to slightly hard dry, loose to friable moist

Reaction—moderately alkaline to very strongly alkaline

Texture—stratified very gravelly sandy loam to extremely gravelly coarse sand

Mclvey Series

The Mclvey series consists of very deep, well drained soils that formed mainly in colluvium derived from andesite, conglomerate, and, in some areas, quartzite. In some areas these soils formed in alluvium derived from quartzite. They are on the side slopes of mountains and on fan piedmont remnants. Slopes are 4 to 75 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 43 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls

Typical pedon: Mclvey gravelly loam, in map unit 1230; in an area where pebbles cover about 45 percent of the surface and cobbles cover 5 percent:

A1—0 to 5 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate very fine subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine and fine roots; common very fine tubular pores; 25 percent pebbles and 5 percent stones; neutral (pH 7.0); clear smooth boundary. (2 to 8 inches thick)

A2—5 to 12 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate very fine subangular blocky structure; slightly hard, friable, sticky and plastic; common fine and medium roots; common fine tubular pores; 30 percent pebbles and 5 percent cobbles; neutral (pH 7.2); clear wavy boundary. (5 to 12 inches thick)

2Bt1—12 to 18 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium angular blocky structure parting to strong very fine angular blocky; very hard, very firm, very sticky and very plastic; common very fine and fine and few medium roots; common fine tubular pores; many moderately thick clay films lining pores; 40 percent pebbles and 5 percent cobbles; neutral (pH 7.3); gradual wavy boundary. (3 to 13 inches thick)

2Bt2—18 to 43 inches; brown (7.5YR 5/4) extremely cobbly clay, dark brown (7.5YR 4/4) moist; strong fine and medium angular blocky structure parting to strong very fine angular blocky; very hard, very firm, very sticky and very plastic; few very fine and fine roots; common fine tubular and interstitial pores; many thick clay films on faces of peds; 40 percent pebbles and 25 percent cobbles; neutral (pH 7.3); diffuse wavy boundary. (15 to 30 inches thick)

2Bt3—43 to 62 inches; reddish yellow (7.5YR 6/6) extremely cobbly clay, strong brown (7.5YR 5/6) moist; moderate fine angular blocky structure; very hard, very firm, very sticky and very plastic; few fine and medium roots; few fine interstitial pores; many thick clay films on faces of peds and lining pores; 45 percent pebbles and 25 percent cobbles; neutral (pH 7.3).

Type location: White Pine County, Nevada; about 1/2 mile east of Peacock Spring; about 1,200 feet south and 2,640 feet east of the northwest corner of sec. 25, T. 17 N., R. 64 E.; north latitude of 39 degrees, 18 minutes, 59 seconds; west longitude of 114 degrees, 43 minutes, 21 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from summer through early fall, moist in winter and spring

Soil temperature: 42 to 47 degrees F

Mollic epipedon: 12 to 20 inches thick, not including the argillic horizon

Control section:

Clay content—35 to 50 percent

Content of rock fragments—average of 35 to 60 percent, mainly pebbles and cobbles

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 to 3

Bt1 horizon:

Hue—7.5YR or 10YR

Value—3 or 4 moist

Chroma—3 or 4

Texture—very gravelly or gravelly clay loam

Consistence—hard or very hard, friable to very firm,

Clay content—30 to 40 percent

Content of rock fragments—15 to 40 percent pebbles and 0 to 10 percent cobbles

Reaction—slightly acid to mildly alkaline

Other features—moist and dry colors of this horizon do not meet the requirements of a mollic epipedon.

Bt2 and Bt3 horizons:

Hue—7.5YR or 10YR

Value—5 or 6 dry, 4 or 5 moist

Chroma—3 to 6

Texture—mainly very gravelly, very cobbly, or extremely cobbly clay; extremely cobbly clay loam or very gravelly clay loam common in some subhorizons below a depth of 40 inches

Clay content—commonly 40 to 50 percent, but in the lower subhorizons 30 to 40 percent in some pedons

Content of rock fragments—35 to 50 percent pebbles, 5 to 25 percent cobbles, 0 to 15 percent stones

Structure—mainly subangular or angular blocky or prismatic; commonly massive in the lower subhorizons

Consistence—hard or very hard, firm or very firm

Reaction—slightly acid to mildly alkaline

Molion Series

The Molion series consists of well drained soils that are shallow over a duripan. These soils formed in alluvium derived from mixed rocks and in some loess. They are on fan piedmont remnants. Slopes are 2 to 15 percent. The

mean annual precipitation is about 10 inches, and the mean annual air temperature is about 52 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic, shallow Haploxerollic Durorthids

Typical pedon: Molion very gravelly sandy loam, in map unit 552; in an area where pebbles cover about 50 percent of the surface:

A—0 to 2 inches; light gray (10YR 7/2) very gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; few fine roots; common fine vesicular pores; 35 percent pebbles; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (1 to 8 inches thick)

Bk—2 to 14 inches; pale brown (10YR 6/3) very gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; 35 percent pebbles; 10 percent duripan fragments; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary. (6 to 15 inches thick)

2Bqkm—14 to 25 inches; strongly cemented duripan with a discontinuous laminar cap.

Type location: White Pine County, Nevada; about 1 mile southwest of the Pagues Station ruins; about 700 feet south and 400 feet east of the northwest corner of sec. 9, T. 15 N., R. 54 E.; north latitude of 39 degrees, 11 minutes, 32 seconds; west longitude of 115 degrees, 54 minutes, 17 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 53 degrees F

Depth to a duripan: 14 to 20 inches

Control section:

Texture—Sandy loam or loam

Clay content—8 to 18 percent

Content of rock fragments—50 to 70 percent

A horizon:

Value—5 to 7 dry, 3 or 4 moist

Chroma—2 or 3

Bk horizon:

Value—5 or 6 dry

Chroma—2 to 4

Effervescence—strongly effervescent or violently effervescent

Consistence—soft or slightly hard

2C horizon:

Value—6 or 7 dry, 4 or 5 moist
 Chroma—2 to 4

Muiral Series

The Muiral series consists of moderately deep, well drained soils that formed in residuum and colluvium derived from calcareous siltstone. These soils are on the side slopes of mountains. Slopes are 30 to 75 percent. The mean annual precipitation is about 16 inches, and the mean annual air temperature is about 41 degrees F.

Taxonomic class: Loamy-skeletal, mixed Typic Cryochrepts

Typical pedon: Muiral gravelly loam, in map unit 1550; in an area where pebbles cover about 5 percent of the surface and Englemann spruce branches cover 15 percent:

Oi—3 to 2 inches; slightly decomposed Englemann spruce litter.

Oe—2 inches to 0; intermediately decomposed Englemann spruce litter.

A1—0 to 3 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and few fine to coarse roots; common very fine tubular pores; 20 percent pebbles; medium acid (pH 6.0); clear irregular boundary. (1 to 5 inches thick)

A2—3 to 9 inches; yellowish brown (10YR 5/4) gravelly loam, dark yellowish brown (10YR 3/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine and few fine to coarse roots; common very fine tubular pores; 30 percent pebbles; slightly acid (pH 6.2); clear wavy boundary. (3 to 9 inches thick)

Bw1—9 to 20 inches; light yellowish brown (10YR 6/4) very gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; many very fine and few fine to coarse roots; common very fine tubular pores; 30 percent pebbles, 10 percent cobbles, and 5 percent stones; slightly acid (pH 6.4); clear smooth boundary. (6 to 14 inches thick)

Bw2—20 to 33 inches; light yellowish brown (10YR 6/4) very gravelly loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine and few fine to coarse roots; common very fine tubular pores; 1 percent very fine, soft masses of lime; 1 percent very thin lime pendants on the

underside of rock fragments; 40 percent pebbles, 10 percent cobbles, and 5 percent stones; neutral (pH 7.3). (10 to 15 inches thick)

2R—33 inches; hard, calcareous siltstone.

Type location: Elko County, Nevada; about 10 miles southwest of Currie, in the Cherry Creek Mountains; about 600 feet east and 1,400 feet south of the northwest corner of sec. 16, T. 26 N., R. 63 E.; north latitude of 40 degrees, 7 minutes, 55 seconds; west longitude of 114 degrees, 52 minutes, 52 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from midsummer through late summer, moist from fall through early summer

Average annual soil temperature: 38 to 45 degrees F

Average summer soil temperature: 43 to 47 degrees F

Depth to bedrock: 20 to 40 inches

Control section:

Clay content—12 to 18 percent

Content of rock fragments—35 to 60 percent (25 to 50 percent pebbles and 10 to 20 percent cobbles and stones)

Texture—very gravelly loam or very gravelly silt loam

A horizon:

Value—4 to 6 dry, 2 to 4 moist; lighter than 5.5 dry and 3.5 moist after mixing of the upper 7 inches

Bw horizon:

Chroma—3 or 4

Nyak Series

The Nyak series consists of very deep, well drained soils that formed in mixed alluvium over lacustrine sediments. These soils are on lake plains and alluvial flats. Slopes are 0 to 2 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Durorthidic Xeric Torriorthents

Typical pedon: Nyak fine sandy loam, in map unit 940:

A1—0 to 3 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; weak thin platy structure parting to weak fine subangular blocky; soft, very friable, nonsticky and nonplastic; common fine and medium and few coarse roots; common medium interstitial pores; strongly effervescent; moderately alkaline (pH 8.2); gradual smooth boundary. (1 to 4 inches thick)

A2—3 to 9 inches; very pale brown (10YR 7/3) very fine sandy loam, yellowish brown (10YR 5/4) moist;

moderate thin platy structure; slightly hard, firm, nonsticky and nonplastic; few fine to coarse roots; few very fine tubular pores; few soft masses of lime less than 1 millimeter in diameter; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (4 to 10 inches thick)

Bqky—9 to 14 inches; very pale brown (10YR 7/3) fine sandy loam, yellowish brown (10YR 5/4) moist; moderate fine and medium subangular blocky structure parting to weak fine angular blocky; hard, firm, nonsticky and nonplastic; common fine and medium and few coarse roots; few very fine tubular pores; 25 percent durinodes; few soft masses of lime less than 1 millimeter in diameter; few fine gypsum crystals; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (4 to 7 inches thick)

2Bqk1—14 to 30 inches; light gray (2.5Y 7/2) fine sandy loam, grayish brown (2.5Y 5/2) moist; few faint medium dark grayish brown (10YR 4/2) mottles; strong medium platy structure; hard, firm, nonsticky and nonplastic; few very fine roots between plates; few very fine and fine tubular pores; weak thin discontinuous laminar cap; weak discontinuous cementation; 25 percent durinodes; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (14 to 20 inches thick)

2Bqk2—30 to 38 inches; light gray (2.5Y 7/2) silty clay loam, grayish brown (2.5Y 5/2) moist; common fine prominent dark grayish brown (10YR 4/2) mottles; strong very fine to medium angular blocky structure; hard, firm, sticky and plastic; very few very fine roots; few fine tubular and common fine interstitial pores; weak discontinuous silica cementation; silica coatings on faces of peds; white (10YR 8/2) lime filaments in seams; violently effervescent; strongly alkaline (pH 8.8); clear wavy boundary. (4 to 8 inches thick)

3Bqk3—38 to 60 inches; light brownish gray (2.5Y 6/2) fine sandy loam, light olive brown (2.5Y 5/4) moist; common distinct strong brown (7.5YR 5/6) mottles; moderate thin platy structure; hard, firm, nonsticky and nonplastic; very few very fine roots; few fine interstitial pores; weak discontinuous cementation; common distinct white (10YR 8/2) lime filaments; few distinct very dark brown (10YR 2/2) manganese stains; violently effervescent; strongly alkaline (pH 9.0)

Type location: White Pine County, Nevada; about 4 miles south of U.S. Highway 50, in Jakes Valley; in an unsectionalized area about 2,100 feet west and 300 feet north of the projected southeast corner of sec. 16, T. 17 N., R. 60 E.; north latitude of 34 degrees, 20 minutes, 35 seconds; west longitude of 115 degrees, 13 minutes, 50 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from late spring through fall

Soil temperature: 47 to 52 degrees F

Depth to lacustrine sediments: 12 to 20 inches

Depth to the duric horizons: 12 to 20 inches

Control section:

Clay content—average of 10 to 18 percent

Content of rock fragments—0 to 15 percent

A horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 or 4

Bqky horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—3 or 4

Other features—10 to 30 percent durinodes 15 to 30 mm in diameter

2Bqk horizon:

Hue—2.5Y or 5Y

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 to 4

Texture—stratified fine sandy loam to silty clay loam

Other features—10 to 30 percent durinodes 15 to 30 mm in diameter in a matrix that is 20 to 60 percent discontinuously weakly lime and silica cemented

3Bqk horizon:

Hue—2.5Y or 5Y

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 or 3 dry, 4 or 5 moist

Nyala Series

The Nyala series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on fan piedmont remnants. Slopes are 0 to 4 percent. The mean annual precipitation is about 6 inches, and the mean annual air temperature is about 53 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Duric Haplargids

Typical pedon: Nyala sandy loam, in map unit 621:

A—0 to 3 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 4/3) moist; weak thin platy structure; soft, very friable, nonsticky and nonplastic; few root crowns; common fine vesicular pores; 5 percent pebbles; slightly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (1 to 13 inches thick)

Bt—3 to 9 inches; light yellowish brown (10YR 6/4) sandy clay loam, dark yellowish brown (10YR 4/4) moist; weak coarse prismatic structure parting to moderate fine subangular blocky; slightly hard, friable, sticky and plastic; common fine to coarse roots; common fine and medium tubular pores; 5 percent pebbles; few thin clay films on faces of peds; strongly effervescent; strongly alkaline (pH 8.5); clear smooth boundary. (4 to 9 inches thick)

Btk—9 to 12 inches; very pale brown (10YR 7/4) sandy clay loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard, friable, sticky and plastic; common fine to coarse roots; common fine and medium tubular pores; 10 percent pebbles; clay films in pores and bridging sand grains; common fine, soft masses of lime; violently effervescent; strongly alkaline (pH 8.5); clear smooth boundary. (3 to 8 inches thick)

Bk—12 to 20 inches; very pale brown (10YR 7/3) sandy loam, light yellowish brown (10YR 6/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine to coarse roots; common fine and medium tubular pores; 5 percent pebbles; many fine and medium, slightly hard masses of lime; violently effervescent; strongly alkaline (pH 9.0); gradual smooth boundary. (0 to 8 inches thick)

Bqk—20 to 46 inches; light gray (10YR 7/2), weakly cemented sandy loam, pale brown (10YR 6/3) moist; massive; hard, firm, slightly sticky and slightly plastic; very few fine and medium roots; common fine and medium tubular pores; 10 percent pebbles, including duripan fragments; about 20 percent durinodes; violently effervescent; strongly alkaline (pH 9.0); gradual smooth boundary. (8 to 26 inches thick)

2C1—46 to 56 inches; very pale brown (10YR 7/3) loamy sand, brown (10YR 5/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; very few fine roots; common fine tubular pores; 5 percent pebbles; few fine, soft masses of lime; violently effervescent; strongly alkaline (pH 9.0) gradual smooth boundary. (10 to 16 inches thick)

2C2—56 to 60 inches; very pale brown (10YR 7/3) gravelly loamy sand, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; very few fine roots; common fine tubular pores; few slightly hard masses of lime; violently effervescent; strongly alkaline (pH 9.0)

Type location: White Pine County, Nevada; about 2.5 miles west of Lund, in the White River Valley; about 800 feet west and 450 feet north of the southeast corner of sec. 25, T. 12 N., R. 61 E.; north latitude of 38 degrees, 51 minutes, 56 seconds; west longitude of 115 degrees, 3 minutes, 30 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in some part for short periods from winter through early spring and for 10 to 20 cumulative days between July and October because of convection storms

Soil temperature: 53 to 59 degrees F

Depth to continuous weak silica cementation: 20 to 30 inches

Depth to secondary carbonates: 9 to 22 inches

Depth to the 2C horizon (if it occurs): 40 to 60 inches

A horizon:

Value—6 or 7

Chroma—2 or 3

Bt horizon:

Hue—7.5YR or 10YR

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Clay content—20 to 35 percent

Content of rock fragments—5 to 15 pebbles

Structure—weak or moderate, fine to coarse subangular blocky or prismatic

Consistence—slightly hard or hard, very friable or friable

Effervescence—strongly effervescent or violently effervescent

Reaction—moderately alkaline to very strongly alkaline

Other features—in most pedons, few or common medium lime segregations and common fine, very hard lime nodules in subhorizons; in some pedons, a Bk horizon underlying the Bt horizon

Bqk horizon:

Value—7 or 8 dry, 5 to 7 moist

Chroma—1 to 4

Clay content—3 to 5 percent

Content of rock fragments—0 to 20 percent; thin strata with 70 percent pebbles in some pedons

Structure—weak medium to thick platy or massive

Consistence—hard or very hard

Reaction—strongly alkaline or very strongly alkaline

Other features—subhorizons that are continuously weakly cemented; as much as 30 percent hard and firm durinodes commonly in any subhorizon

Onkeyo Series

The Onkeyo series consists of shallow, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on the side slopes of mountains. Slopes are 15 to 75 percent. The

mean annual precipitation is about 16 inches, and the mean annual air temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Calcixerolls

Typical pedon: Onkeyo very gravelly silt loam, in map unit 850; in an area where pebbles cover about 60 percent of the surface, cobbles cover 5 percent, and stones cover 2 percent:

- A1—0 to 2 inches; grayish brown (10YR 5/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine and fine vesicular pores; many thin lime coatings on the underside of rock fragments; 40 percent pebbles; slightly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (2 to 5 inches thick)
- A2—2 to 5 inches; grayish brown (10YR 5/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine tubular and interstitial pores; many thin lime coatings on the underside of rock fragments; 50 percent pebbles; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (3 to 7 inches thick)
- A3—5 to 8 inches; brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; many very fine tubular and interstitial pores; common moderately thick lime coatings; 40 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (0 to 3 inches thick)
- Bk—8 to 15 inches; pale brown (10YR 6/3) extremely cobbly silty clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine tubular pores; common moderately thick lime coatings; 35 percent pebbles and 30 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (6 to 9 inches thick)
- R—15 inches; hard limestone.

Type location: White Pine County, Nevada; about 1.5 miles south of Little Antelope Summit, in the White Pine Range; about 2,300 feet east and 1,200 feet south of the projected northwest corner of sec. 5, T.

17 N., R. 58 E.; north latitude of 39 degrees, 22 minutes, 30 seconds; west longitude of 115 degrees, 28 minutes, 6 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through spring, dry from summer through midfall

Soil temperature: 43 to 47 degrees F

Mollic epipedon: 7 to 10 inches thick

Depth to the calcic horizon: 7 to 10 inches

Depth to bedrock: 14 to 20 inches

Reaction: Mildly alkaline to strongly alkaline

Control section:

Clay content—27 to 35 percent

Content of rock fragments—50 to 80 percent, mainly cobbles

A horizon:

Value—4 or 5 dry

Effervescence—slightly effervescent to violently effervescent

Calcium carbonate equivalent—1 to 10 percent

Bk horizon:

Value—6 or 7 dry, 3 to 5 moist

Chroma—3 or 4

Texture—very cobbly or extremely cobbly silty clay loam

Clay content—27 to 35 percent

Content of rock fragments—50 to 80 percent, mainly cobbles

Structure—subangular or angular blocky

Calcium carbonate equivalent—15 to 35 percent

Orr Series

The Orr series consists of very deep, well drained soils that formed in mixed alluvium or colluvium derived from sandstone, shale, or tuff. These soils are on fan piedmont remnants and hills. Slopes are 2 to 15 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 50 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Aridic Argixerolls

Typical pedon: Orr gravelly sandy loam, in map unit 842:

A—0 to 5 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; common

very fine and fine vesicular pores; 15 percent pebbles; neutral (pH 7.3); abrupt smooth boundary. (5 to 7 inches thick)

Bt1—5 to 9 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate coarse subangular blocky structure parting to moderate fine subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine and fine tubular pores; few thin clay films on faces of peds and lining pores; 15 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (4 to 8 inches thick)

Bt2—9 to 15 inches; brown (10YR 5/3) gravelly sandy clay loam, dark brown (10YR 3/3) moist; moderate coarse subangular blocky structure parting to moderate fine subangular blocky; hard, friable, sticky and plastic; common very fine to medium roots; common very fine and fine tubular pores; 15 percent pebbles; few thin clay films; mildly alkaline (pH 7.6); clear smooth boundary. (6 to 10 inches thick)

Bt3—15 to 26 inches; pale brown (10YR 6/3) gravelly sandy clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine to medium roots; common fine tubular pores; 15 percent pebbles; very few thin clay films; mildly alkaline (pH 7.8); clear wavy boundary. (10 to 20 inches thick)

BC—26 to 35 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; hard, friable, nonsticky and nonplastic; very few fine roots; common fine tubular pores; 20 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary. (0 to 9 inches thick)

C—35 to 60 inches; pale brown (10YR 6/3) gravelly sandy loam, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; very few fine roots; common fine tubular pores; 25 percent pebbles and 5 percent cobbles; few thin lime films and coatings on the underside of rock fragments; mildly alkaline (pH 7.8).

Type location: White Pine County, Nevada; about 20 miles south of Ely; about 1,300 feet east and 1,500 feet south of the northwest corner of sec. 29, T. 13 N., R. 64 E.; north latitude of 38 degrees, 57 minutes, 47 seconds; west longitude of 114 degrees, 48 minutes, 53 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in late winter and spring, dry in summer and fall

Soil temperature: 49 to 53 degrees F

Mollic epipedon: 10 to 20 inches thick, including the upper part of the Bt horizon in some pedons

Control section:

Clay content—18 to 25 percent

Content of rock fragments—average of 10 to 25 percent

A horizon:

Hue—10YR or 7.5YR

Value—4 or 5 dry

Chroma—2 or 3

Bt horizon:

Hue—10YR or 7.5YR

Value—5 or 6 dry

Chroma—3 or 4

Texture—sandy loam, sandy clay loam, or loam

Structure—weak angular blocky or prismatic or massive

Content of rock fragments—0 to 35 percent in any one horizon, average of 10 to 25 percent

C horizon:

Hue—10YR or 7.5YR

Value—6 or 7 dry, 4 to 6 moist

Chroma—3 or 4

Texture—sand, loamy fine sand, sandy loam, fine sandy loam, sandy clay loam, or clay loam; gravelly or very gravelly in some pedons

Content of rock fragments—0 to 20 percent cobbles; in some pedons, lime on the underside of rock fragments

Durinodes—occurring in some pedons, averaging less than 20 percent

Orupa Series

The Orupa series consists of very deep, well drained soils that formed in windblown clay. These soils are on parna dunes. Slopes are 0 to 15 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Xeric Torriorthents

Typical pedon: Orupa clay loam, in map unit 740:

A—0 to 4 inches; light gray (2.5Y 7/2) clay loam, light brownish gray (2.5Y 6/2) moist; moderate medium platy structure; soft, very friable, sticky and plastic; many very fine and fine roots; common very fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (1 to 5 inches thick)

C1—4 to 24 inches; light gray (2.5Y 7/2) clay loam, light

brownish gray (2.5Y 6/2) moist; strong very fine granular structure; soft, very friable, sticky and plastic; many very fine and fine roots; common very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (10 to 40 inches thick)

C2—24 to 60 inches; light gray (2.5Y 7/2) clay loam, light brownish gray (2.5Y 6/2) moist; strong very fine granular structure; soft, very friable, sticky and plastic; common very fine roots; common very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 7 miles north of Dry Lake Well, in Long Valley; about 1,900 feet north and 1,200 feet west of the southeast corner of sec. 30, T. 22 N., R. 59 E.; north latitude of 39 degrees, 45 minutes, 14 seconds; west longitude of 115 degrees, 23 minutes, 5 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Other features: Soil forms sand-sized aggregates, which initially give a texture of fine sandy loam.

Control section:

Clay content—35 to 55 percent

A horizon:

Hue—2.5Y or 10YR

Value—6 to 8 dry, 5 to 7 moist

Chroma—2 or 3

C horizon:

Hue—2.5Y or 10YR

Value—6 to 8 dry, 5 to 7 moist

Chroma—2 or 3

Texture—clay loam, silty clay loam, silty clay, or clay

Clay content—35 to 55 percent

Structure—granular or subangular blocky

Palinor Series

The Palinor series consists of well drained soils that are shallow over a duripan. These soils formed in alluvium derived from limestone and dolomite. They are on fan piedmont remnants. Slopes are 2 to 50 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic, shallow Xerollic Durorthids

Typical pedon: Palinor very gravelly loam, in map unit 282:

A—0 to 3 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; 35 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (2 to 4 inches thick)

Bw—3 to 10 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine to medium roots; common very fine tubular pores; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (7 to 10 inches thick)

Bk—10 to 18 inches; very pale brown (10YR 7/3) extremely gravelly fine sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine and few coarse roots; common very fine tubular pores; 70 percent pebbles; lime coatings on pebbles; many medium, hard masses of lime; thin strata and pockets of pinkish gray (7.5YR 7/2) material; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (3 to 10 inches thick)

Bqkm—18 to 30 inches; white (10YR 8/1), indurated duripan with a laminar cap 2 to 5 mm thick; white (10YR 8/1) moist; 75 percent pebbles; abrupt wavy boundary. (10 to 20 inches thick)

2Cqk—30 to 46 inches; pale brown (10YR 6/3) extremely gravelly sandy loam, dark brown (10YR 4/3) moist; massive; hard, firm, nonsticky and nonplastic; few very fine roots; few very fine interstitial pores; 70 percent pebbles; continuous strong cementation with pockets of weak cementation; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (10 to 30 inches thick)

3Ck—46 to 60 inches; pale brown (10YR 6/3), stratified very gravelly coarse sandy loam and very gravelly sandy loam, dark brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; common very fine interstitial pores; 55 percent pebbles; discontinuous weak cementation; strongly effervescent; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; about 11 miles south of Lund, in the White River Valley; about 1,250 feet south and 200 feet west of the northeast corner of sec. 30, T. 10 N., R. 62 E.; north latitude of 38 degrees, 42 minutes, 6 seconds; west longitude of 115 degrees, 2 minutes, 29 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Depth to a duripan: 14 to 20 inches

Reaction: Moderately alkaline or strongly alkaline

Control section:

Clay content—10 to 18 percent

Content of rock fragments—45 to 75 percent pebbles and 0 to 5 percent cobbles

A horizon:

Value—5 to 7 dry, 4 or 5 moist

Chroma—2 or 3

Bw and Bk horizons:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Bqkm horizon:

Value—7 or 8 dry or moist

Chroma—1 to 3

Cqk horizon:

Value—6 to 8 dry, 4 to 6 moist; may be variegated in coarse textured subhorizons

Chroma—1 to 3

Content of rock fragments—45 to 70 percent pebbles and 0 to 20 percent cobbles

Other features—discontinuously weakly to strongly silica and lime cemented subhorizons in most pedons

Parisa Series

The Parisa series consists of well drained soils that are moderately deep over an indurated duripan. These soils formed in alluvium derived from limestone and dolomite. They are on fan piedmont remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic Xerollic Durorthids

Typical pedon: Parisa gravelly loam, in map unit 336; in an area where pebbles cover about 35 percent of the surface:

A—0 to 4 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular and interstitial pores; 25 percent pebbles; strongly

effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (2 to 4 inches thick)

Bk—4 to 16 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine tubular pores; thin lime coatings on the underside of rock fragments; 35 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (8 to 20 inches thick)

Bqk—16 to 26 inches; very pale brown (10YR 7/3) very gravelly loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard and hard, friable to brittle, slightly sticky and slightly plastic; few very fine to medium roots; few very fine tubular pores; weak discontinuous lime and silica cementation; thin or moderately thick lime coatings on the underside of rock fragments; 35 percent pebbles and 5 percent cobbles; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary. (7 to 20 inches thick)

2Bqkm—26 to 47 inches; indurated duripan with a continuous laminar cap 1 to 2 mm thick; massive to thick platy structure; 70 percent pebbles and 5 percent cobbles; violently effervescent; clear wavy boundary. (20 to 30 inches thick)

2Bqk—47 to 60 inches; pale brown (10YR 6/3) extremely gravelly coarse sandy loam, brown (10YR 4/3) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine interstitial pores; weak discontinuous lime and silica cementation; thin lime coatings on the top and sides of rock fragments and moderately thick lime coatings on the bottom; 60 percent pebbles and 10 percent cobbles; slightly effervescent; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; about 8 miles south of Lund; about 1,300 feet west and 375 feet north of the southeast corner of sec. 8, T. 10 N., R. 62 E.; north latitude of 38 degrees, 44 minutes, 5 seconds; west longitude of 115 degrees, 1 minute, 35 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from late spring through fall

Soil temperature: 47 to 52 degrees F

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Depth to lime and silica cementation: 8 to 24 inches

Depth to an indurated duripan: 20 to 40 inches

Control section:

Content of clay—8 to 18 percent
 Content of rock fragments—35 to 60 percent,
 dominantly pebbles
 Texture—very gravelly loam or very gravelly sandy
 loam; in some pedons, thin strata of gravelly loam
 Calcium carbonate equivalent—40 to 60 percent, by
 weight, in the fraction less than 20 millimeters in
 size

A horizon:

Value—5 or 6 dry
 Chroma—2 or 3

Bqk horizon:

Hue—10YR and 7.5YR
 Value—6 or 7 dry, 4 to 6 moist
 Chroma—2 to 4
 Structure—weak or moderate subangular blocky or
 massive
 Silica cementation—20 to 60 percent discontinuous
 and weak

2Bqkm horizon:

Structure—thick or very thick platy or massive

2Bqk horizon:

Value—6 or 7 dry, 4 or 5 moist
 Chroma—2 to 4
 Consistence—slightly hard or hard, very friable or
 friable
 Silica cementation—20 percent discontinuous and
 weak or continuous and weak
 Other features—in some pedons, thin strata of
 uncemented very gravelly sandy loam, thin strata
 of strong silica cementation, or both

Pern Series

The Pern series consists of very deep, well drained
 soils that formed in mixed alluvium on inset fans and
 alluvial flats. Slopes are 0 to 2 percent. The mean annual
 precipitation is about 10 inches, and the mean annual air
 temperature is about 46 degrees F.

Taxonomic class: Fine-silty, mixed, mesic Calciorthidic
 Haploxerolls

Typical pedon: Pern silt loam, in map unit 990:

A1—0 to 3 inches; brown (10YR 5/3) silt loam, dark brown
 (10YR 3/3) moist; weak thin platy structure; soft, very
 friable, slightly sticky and slightly plastic; few very fine
 roots in the lower part; common very fine vesicular
 pores; 5 percent pebbles; slightly effervescent;
 moderately alkaline (pH 7.9); clear smooth boundary.
 (2 to 5 inches thick)

A2—3 to 14 inches; brown (10YR 5/3) silt loam, dark
 brown (10YR 3/3) moist; weak very fine subangular
 blocky structure; slightly hard, friable, sticky and
 plastic; common very fine to medium roots;
 common very fine and fine tubular pores; 5 percent
 pebbles; slightly effervescent; moderately alkaline
 (pH 7.9); clear smooth boundary. (8 to 15 inches thick)

AB—14 to 20 inches; pale brown (10YR 6/3) silt loam,
 dark brown (10YR 3/3) moist; weak very fine
 subangular blocky structure; slightly hard, friable,
 sticky and plastic; common very fine and fine roots;
 common very fine and fine tubular pores; 5 percent
 pebbles; slightly effervescent; moderately alkaline
 (pH 8.0); abrupt smooth boundary. (0 to 10 inches
 thick)

Bk1—20 to 33 inches; pale brown (10YR 6/3) silt loam,
 dark brown (10YR 4/3) moist; massive; hard, firm,
 sticky and plastic; few very fine roots; few very fine
 tubular pores; many thin filaments and soft masses of
 lime; 5 percent pebbles; strongly effervescent;
 moderately alkaline (pH 8.0); abrupt smooth
 boundary. (10 to 15 inches thick)

Bk2—33 to 60 inches; light gray (10YR 7/2) silt loam,
 grayish brown (10YR 5/2) moist; massive; slightly
 hard, very friable, slightly sticky and slightly
 plastic; very few very fine roots; few very fine
 tubular pores; 5 percent pebbles; 10 percent weakly
 lime cemented, 2- to 5-mm and sand sized
 concretions; many thin filaments and soft masses of
 lime; strongly effervescent; moderately alkaline
 (pH 8.2).

Type location: White Pine County, Nevada; about 2,600
 feet west and 2,225 feet south of the northeast corner
 of sec. 29, T. 13 N., R. 64 E.; north latitude of 38
 degrees, 57 minutes, 38 seconds; west longitude of
 114 degrees, 48 minutes, 29 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is
 above 41 degrees F; moist from winter through early
 spring, dry from late spring through fall

Soil temperature: 47 to 52 degrees F

Mollic epipedon: 10 to 20 inches thick

Control section:

Clay content—18 to 25 percent
 Content of rock fragments—0 to 5 percent pebbles

A horizon:

Value—4 or 5 dry, 2 or 3 moist
 Chroma—2 or 3

Bk horizon:

Value—6 to 8 dry, 3 to 5 moist
 Chroma—2 or 3

Carbonates—few or common fine and medium, soft, powdery masses and filaments of lime
 Other features—lenses of coarser and finer textures below a depth of 40 inches in some pedons

Pioche Series

The Pioche series consists of very shallow and shallow, well drained soils that formed in residuum and colluvium derived from andesite and conglomerate. These soils are on the side slopes of hills and mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 13 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Lithic Argixerolls

Typical pedon: Pioche extremely stony loam, in map unit 752; in an area where pebbles cover about 30 percent of the surface, cobbles cover 15 percent, and stones cover 25 percent:

A—0 to 3 inches: brown (10YR 5/3) extremely stony loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium angular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; few fine and medium vesicular pores; 30 percent pebbles, 10 percent cobbles, and 25 percent stones; mildly alkaline (pH 7.6); clear smooth boundary. (0.5 inch to 3 inches thick)

Bt1—3 to 8 inches; dark brown (7.5YR 4/2) very cobbly clay loam, very dark brown (10YR 2/2) moist; moderate fine angular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common fine tubular pores; common thick clay films on faces of peds; 15 percent pebbles, 15 percent cobbles, and 5 percent stones; mildly alkaline (pH 7.8); clear smooth boundary. (3 to 7 inches thick)

Bt2—8 to 10 inches; brown (7.5YR 5/3) very cobbly clay, dark brown (7.5YR 3/3) moist; strong fine and medium angular blocky structure; hard, firm, very sticky and very plastic; few very fine to coarse roots; common fine and medium tubular pores; common thick clay films on faces of peds and lining pores; 25 percent pebbles, 15 percent cobbles, and 5 percent stones; mildly alkaline (pH 7.8); abrupt wavy boundary. (0 to 4 inches thick)

Bt3—10 to 15 inches; brown (7.5YR 5/3) very cobbly clay, dark brown (7.5YR 4/3) moist; strong fine and medium angular blocky structure; hard, firm, very sticky and very plastic; few very fine and fine roots; few fine and medium tubular pores; common thick clay films on faces of peds and lining pores; 25 percent pebbles, 15 percent cobbles, and 5 percent

stones; mildly alkaline (pH 7.8); abrupt wavy boundary. (2 to 5 inches thick)
 2R—15 inches; andesite.

Type location: White Pine County, Nevada; about 1,900 feet east and 1,200 feet south of the northwest corner of sec. 3, T. 11 N., R. 60 E.; north latitude of 38 degrees, 50 minutes, 45 seconds; west longitude of 115 degrees, 13 minutes, 20 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 53 degrees F

Depth to bedrock: 6 to 15 inches

Mollic epipedon: 7 to 10 inches thick when the upper 7 inches is mixed; extending into the upper part of the argillic horizon or to bedrock when the depth is less than 7 inches

Reaction: Neutral or mildly alkaline

Control section:

Clay content—35 to 50 percent

Content of rock fragments—35 to 50 percent, dominantly cobbles

A horizon:

Hue—10YR or 7.5YR

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Bt horizon:

Hue—7.5YR or 5YR

Value—4 or 5 dry, 2 to 4 moist

Chroma—2 to 4

Structure—weak or moderate prismatic; moderate or strong, fine or medium angular blocky; or moderate or strong subangular blocky

Pookaloo Series

The Pookaloo series consists of shallow, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on hills and the side slopes of mountains. Slopes are 8 to 75 percent. The mean annual precipitation is about 13 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic Lithic Xerollic Calciorthids

Typical pedon: Pookaloo very gravelly loam, in map unit 113; in an area where pebbles cover about 60 percent of the surface and cobbles cover 5 percent:

A—0 to 4 inches; pale brown (10YR 6/3) very gravelly

loam, brown (10YR 4/3) moist; moderate thin platy structure parting to moderate fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and few medium roots; common very fine tubular and few fine interstitial pores; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (2 to 6 inches thick)

Bk1—4 to 9 inches; yellowish brown (10YR 5/4) very gravelly loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common fine and few medium tubular pores; common lime pendants, 2 to 4 mm thick, on the underside of pebbles; 45 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (3 to 7 inches thick)

Bk2—9 to 13 inches; yellowish brown (10YR 5/4) very gravelly silt loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; common fine and medium and few coarse roots; common fine and few medium tubular pores; common lime pendants, 2 to 4 mm thick, on the underside of pebbles; 50 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (2 to 6 inches thick)

Bk3—13 to 19 inches; yellowish brown (10YR 5/4) very gravelly silt loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine and fine and common medium and coarse roots; common fine and few medium and coarse tubular pores; common lime pendants, 2 to 4 mm thick, on the underside of pebbles; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (4 to 8 inches thick)

2R—19 inches; very pale brown (10YR 8/3), fractured limestone.

Type location: White Pine County, Nevada; about 2.5 miles southeast of McBride Sheep Well, in Long Valley; about 400 feet west and 100 feet south of the northeast corner of sec. 4, T. 20 N., R. 59 E.; north latitude of 39 degrees, 38 minutes, 20 seconds; west longitude of 115 degrees, 19 minutes, 35 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall, except for 10 to 20 cumulative days between July and October because of convection storms

Soil temperature: 47 to 52 degrees F

Depth to bedrock: 14 to 20 inches

Depth to the calcic horizon: 2 to 6 inches

Control section:

Clay content—10 to 18 percent

Texture—very gravelly silt loam or very gravelly loam
Content of rock fragments—35 to 50 percent, mainly pebbles

Calcium carbonate equivalent—40 to 70 percent in the fraction less than 20 millimeters in size

A horizon:

Value—5 to 7 dry, 4 to 6 moist

Chroma—3 to 6 dry or moist

Bk horizon:

Value—5 to 7 dry, 4 to 6 moist

Chroma—3 to 6 dry or moist

Structure—subangular blocky or massive

Secondary carbonates—5 to 20 percent, by volume, lime pendants, 1 to 5 millimeters thick, on the underside of pebbles

Puett Series

The Puett series consists of shallow, well drained soils that formed in residuum derived from tuffaceous sediments. These soils are on the summits and side slopes of hills. Slopes are 8 to 30 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed (calcareous), mesic, shallow Xeric Torriorthents

Typical pedon: Puett gravelly loam, in map unit 680:

A1—0 to 2 inches; light gray (10YR 7/2) gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate thin platy structure; soft, very friable, slightly sticky and nonplastic; few very fine and fine roots; common very fine and fine vesicular pores; 15 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (1 to 3 inches thick)

A2—2 to 5 inches; light brownish gray (10YR 6/2) sandy loam, dark yellowish brown (10YR 4/4) moist; moderate thin platy structure; soft, very friable, slightly sticky and nonplastic; common very fine to coarse roots; common very fine and fine tubular pores; 5 percent pebbles; violently effervescent; moderately alkaline (pH 8.6); clear smooth boundary. (0 to 6 inches thick)

Ck—5 to 14 inches; pale brown (10YR 6/3) sandy loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; common very fine to coarse roots; common very fine and fine tubular pores; 10 percent pebbles; violently effervescent; strongly

alkaline (pH 8.8); abrupt wavy boundary. (6 to 12 inches thick)

Cr—14 to 24 inches; light brownish gray (10YR 6/2), highly weathered, tuffaceous bedrock; common thin patchy lime and silica coatings along the upper horizon boundary, becoming hard at a depth of 24 inches.

Type location: White Pine County, Nevada; about 5 miles north of Cold Springs Ranch; in an unsectionalized area about 2,700 feet east and 1,200 feet south of the southeast corner of sec. 36, T. 24 N., R. 55 E.; north latitude of 39 degrees, 54 minutes, 20 seconds; west longitude of 115 degrees, 42 minutes, 30 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees; moist in winter and spring, dry from June through October

Soil temperature: 47 to 52 degrees F

Depth to bedrock: 10 to 20 inches

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Carbonates: Strongly effervescent or violently effervescent throughout; lime coatings on pebbles in the lower part of some pedons

Control section:

Clay content—5 to 10 percent

Content of rock fragments—as much as 35 percent pebbles

A horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

C horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 or 5 moist

Chroma—2 to 4

Texture of the fine-earth fraction—dominantly coarse sandy loam to loam, but in some pedons loamy fine sand to loam or gravelly loam or gravelly sandy loam

Structure—subangular blocky or massive

Consistence—nonsticky or slightly sticky and nonplastic or slightly plastic

Pyrat Series

The Pyrat series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on inset fans, fan piedmont remnants, fan skirts, and beach plains. Slopes are 0 to 8 percent. The mean annual

precipitation is about 10 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Durixerollic Calciorthids

Typical pedon: Pyrat gravelly sandy loam, in map unit 189; in an area where pebbles cover about 50 percent of the surface:

A1—0 to 2 inches; light brownish gray (10YR 6/2) gravelly sandy loam, brown (10YR 4/3) moist; moderate thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; few thin lime coatings on the underside of pebbles; 15 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0); abrupt wavy boundary. (1 to 4 inches thick)

A2—2 to 6 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; pebbles with many thin lime coatings on all sides and with lime pendants; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 6 inches thick)

Bw—6 to 17 inches; very pale brown (10YR 7/3) very gravelly sandy loam, brown (10YR 5/3) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and few fine to coarse roots; many very fine tubular and interstitial pores; many moderately thick lime coatings on pebbles and many moderately thick lime coatings on the underside of pebbles; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt irregular boundary. (8 to 14 inches thick)

Bk—17 to 27 inches; white (10YR 8/2) very gravelly loam, very pale brown (10YR 7/3) moist; massive; very hard, firm, slightly sticky and slightly plastic; moderate very fine and few fine and medium roots; moderate very fine tubular pores; 10 percent krotovinas; many moderately thick lime coatings on all sides of pebbles and some pendants; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.3); gradual irregular boundary. (6 to 16 inches thick)

2Bqk—27 to 39 inches; white (10YR 8/2) very gravelly sandy loam, very pale brown (10YR 7/3) moist; massive; hard, friable, nonsticky and nonplastic; many very fine and few fine roots; many very fine interstitial pores; lenses, 1 to 3 inches thick, of discontinuous weak silica cementation; many moderately thick lime coatings on all sides of pebbles and some pendants; 55 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); gradual irregular boundary. (10 to 25 inches thick)

3C—39 to 60 inches; very pale brown (10YR 7/3) extremely gravelly loamy sand, brown (10YR 5/3) moist; massive; hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; many discontinuous lime coatings on all sides of pebbles and some pendants; 80 percent pebbles; violently effervescent; strongly alkaline (pH 8.8).

Type location: White Pine County, Nevada; about 6 miles southwest of Lages Station; about 2,800 feet north and 1,000 feet west of the southeast corner of sec. 36, T. 25 N., R. 64 E.; north latitude of 39 degrees, 59 minutes, 10 seconds; west longitude of 114 degrees, 40 minutes, 53 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Depth to the Bk horizon: 14 to 20 inches

Depth to the 2Bkq horizon: 22 to 32 inches

Thickness of the calcic horizon: 18 to 40 inches

Control section:

Clay content—10 to 18 percent

Content of rock fragments—35 to 60 percent

A horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3

Bw horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 or 4

Bk horizon:

Value—6 to 8 dry, 5 to 7 moist

Chroma—2 or 3

Structure—massive or subangular blocky

Reaction—moderately alkaline or strongly alkaline

Other features—may be as much as 15 percent discontinuous weak lime-silica cementation or durinodes

2Bqk horizon:

Value—7 or 8 dry, 6 or 7 moist

Chroma—2 or 3

Other features—30 to 70 percent weak silica-lime cementation occurring as discontinuous horizontal strata

3C horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—3 or 4

Texture—stratified very gravelly sandy loam to extremely gravelly loamy sand

Content of rock fragments—35 to 80 percent pebbles and as much as 10 percent cobbles

Raph Series

The Raph series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on lake plains, beach plains, fan skirts, and alluvial flats. Slopes are 0 to 4 percent. The mean annual precipitation is about 7 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Typic Camborthids

Typical pedon: Raph loam, in map unit 244:

An—0 to 4 inches; very pale brown (10YR 7/3) loam, brown (10YR 4/3) moist; moderate thin platy structure; hard, friable, sticky and plastic; common very fine and fine vesicular pores; 5 percent pebbles; strongly alkaline (pH 8.6); abrupt smooth boundary. (3 to 7 inches thick)

Bwn—4 to 14 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; common fine and medium roots; moderate very fine and fine tubular pores; 5 percent pebbles; slightly effervescent; strongly alkaline (pH 8.6); gradual smooth boundary. (7 to 13 inches thick)

Bqkn1—14 to 30 inches; very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, sticky and plastic; common fine and medium roots; moderate very fine and fine tubular pores; 10 percent pebbles; 5 percent fine durinodes; common thin lime films; violently effervescent; strongly alkaline (pH 8.8); gradual smooth boundary. (10 to 25 inches thick)

2Bqkn2—30 to 42 inches; very pale brown (10YR 7/3) gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; hard, friable, slightly sticky and slightly plastic; few fine and medium roots; common very fine and fine tubular pores; 25 percent pebbles; 5 percent fine durinodes; common thin lime films; few masses of weak silica cementation much as 2 inches thick; violently effervescent; strongly alkaline (pH 9.0); gradual smooth boundary. (10 to 20 inches thick)

3Bqkn3—42 to 60 inches; very pale brown (10YR 7/3), stratified fine sandy loam to very gravelly coarse sand, light yellowish brown (10YR 6/4) moist; hard, friable, nonsticky and nonplastic; few fine roots; common very fine and fine tubular pores; common silica-cemented fragments as much as 2 inches thick;

few lime films; violently effervescent; strongly alkaline (pH 8.8).

Type location: White Pine County, Nevada; about 350 feet north and 3,000 feet east of the projected southwest corner of sec. 10, T. 11 N., R. 61 E.; north latitude of 39 degrees, 49 minutes, 17 seconds; west longitude of 115 degrees, 6 minutes, 13 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist for short periods in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Thickness of the A and Bw horizons: 11 to 20 inches

Control section:

Clay content—average of 18 to 25 percent

A horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Bwn horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Texture—loam or silt loam

Content of rock fragments—0 to 15 percent

Clay content—20 to 27 percent

Bqkn1 horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—3 or 4

Clay content—20 to 27 percent

2Bqkn2 horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—3 or 4

Clay content—15 to 20 percent

3Bqk3 horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—3 or 4

Texture—stratified fine sandy loam to very gravelly coarse sand; in some pedons, thin layers of other textures

Clay content—average of 6 to 15 percent

Content of rock fragments—average of 15 to 35 percent

Risley Series

The Risley series consists of moderately deep, well drained soils that formed in residuum derived from shale

and sandstone. These soils are on rock pediments. Slopes are 2 to 8 percent. The mean annual precipitation is about 11 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Xerollic Haplargids

Typical pedon: Risley clay loam, in map unit 902; in an area where pebbles cover about 5 percent of the surface:

A—0 to 3 inches; very pale brown (10YR 7/4) clay loam, dark yellowish brown (10YR 3/4) moist; weak very fine subangular blocky structure; soft, very friable, sticky and plastic; few fine roots; common very fine interstitial pores; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary. (1 to 8 inches thick)

Bt—3 to 11 inches; light yellowish brown (10YR 6/4) clay loam, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; hard, firm, very sticky and very plastic; many very fine and fine roots; common fine tubular pores; 5 percent pebbles; thin patchy clay films on faces of peds; strongly effervescent, moderately alkaline (pH 8.0); clear smooth boundary. (4 to 14 inches thick)

Btk1—11 to 21 inches; light yellowish brown (10YR 6/4) clay, dark yellowish brown (10YR 4/6) moist; moderate fine angular blocky structure; hard, firm, very sticky and very plastic; many very fine and fine roots; common fine tubular pores; 5 percent pebbles; thin lime films on the lower side of pebbles; thin patchy clay films on faces of peds; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (7 to 13 inches thick)

Btk2—21 to 29 inches; light yellowish brown (10YR 6/4) clay loam, yellowish brown (10YR 5/6) moist; moderate medium prismatic structure parting to moderate fine angular blocky; hard, firm, very sticky and very plastic; common very fine and fine roots; common fine tubular pores; 5 percent pebbles; thin lime films on pebbles; few lime films on faces of peds; thin patchy clay films on faces of peds; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (6 to 10 inches thick)

Cr—29 to 32 inches; weathered shale; thin platy; few fine roots between plates and in fractures.

Type location: White Pine County, Nevada; about 2,400 feet east of Red Rock Summit; about 1,200 feet west and 1,800 feet north of the projected southeast corner of sec. 24, T. 15 N., R. 54 E.; north latitude of 39 degrees, 9 minutes, 15 seconds; west longitude of 115 degrees, 50 minutes, 00 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 49 to 50 degrees F

Depth to soft bedrock: Generally 20 to 30 inches, but in some pedons as much as 40 inches

Depth to a Bk horizon (if it occurs): 14 to 20 inches

Depth to a Btk horizon (if it occurs): 8 to 20 inches

Control section:

Clay content—35 to 55 percent

Content of rock fragments—0 to 10 percent

A horizon:

Value—5 to 7 dry, 3 or 4 moist

Chroma—2 to 4

Reaction—Medium acid to moderately alkaline

Bt horizon:

Hue—10YR or 7.5YR

Value—5 or 6 dry, 3 to 5 moist

Chroma—2 to 4

Texture—clay, sandy clay, or clay loam

Clay content—35 to 55 percent

Reaction—slightly acid to moderately alkaline

Btk horizon (if it occurs):

Hue—10YR or 7.5YR

Value—4 or 5 moist

Chroma—4 to 6 moist

Texture—clay or clay loam

Structure—angular blocky or prismatic

Effervescence—strongly effervescent or violently effervescent

Bk horizon (if it occurs):

Reaction—mildly alkaline or moderately alkaline

Effervescence—strongly effervescent or violently effervescent

Roden Series

The Roden series consists of shallow or very shallow, well drained soils that formed in residuum and colluvium derived from shale and sandstone. These soils are on hills and fan piedmont remnants that have a rock core. Slopes are 2 to 50 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic (calcareous), mesic, shallow Xeric Torriorthents

Typical pedon: Roden very gravelly clay loam, in map

unit 632; in an area where pebbles cover about 40 percent of the surface:

A—0 to 2 inches; light yellowish brown (10YR 6/4) very gravelly clay loam, dark yellowish brown (10YR 3/4) moist; moderate very fine subangular blocky structure; slightly hard, friable, sticky and plastic; few fine roots; many very fine interstitial pores; 40 percent pebbles; the top 1/2 inch is a hard vesicular crust; strongly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (2 to 4 inches thick)

Bk1—2 to 5 inches; light yellowish brown (10YR 6/4) very gravelly clay, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; hard, firm, very sticky and very plastic; common very fine to medium roots; common very fine and fine tubular pores; 40 percent pebbles; many thin lime coatings on the lower side of pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (2 to 6 inches thick)

Bk2—5 to 11 inches; light yellowish brown (10YR 6/4) very gravelly clay, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; hard, firm, very sticky and very plastic; common very fine to medium roots; common very fine tubular pores; many thin lime coatings on the lower side of pebbles; common weathered pebble-sized shale fragments; 45 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); abrupt irregular boundary. (0 to 10 inches thick)

Cr—11 to 18 inches; yellowish brown (10YR 5/4) shale; fractured; can be dug by handtools; lime coatings on some fracture faces; roots extending into the fractures.

Type location: White Pine County, Nevada; about 50 miles west of Ely, in the Pancake Range; about 2,400 feet west and 3,400 feet north of the projected southeast corner of sec. 19, T. 16 N., R. 55 E.; north latitude of 39 degrees, 14 minutes, 45 seconds; west longitude of 115 degrees, 49 minutes, 28 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from summer through midfall

Soil temperature: 47 to 52 degrees F

Effervescence: Slightly effervescent to violently effervescent

Depth to paralithic contact: 8 to 14 inches

Control section:

Clay content—average of 40 to 50 percent

Texture—very gravelly clay or very gravelly silty clay
Content of rock fragments—35 to 60 percent

A horizon:

Hue—10YR, 7.5YR, or 5YR
Value—4 to 6 dry, 3 to 5 moist
Chroma—2 to 4

Bk horizon:

Hue—10YR, 7.5YR, 5YR, or 2.5YR
Value—4 to 7 dry, 3 to 6 moist
Chroma—2 to 6
Structure—subangular or angular blocky
Consistence—slightly hard to very hard
Other features—in some pedons, thin layers that have less than 35 percent rock fragments

Cr horizon:

Hue—2.5YR to 10YR

Segura Series

The Segura series consists of very shallow or shallow, well drained soils that formed in residuum and colluvium derived from andesite, quartzite, and conglomerate. These soils are on the side slopes and crests of mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 45 degrees F.

Taxonomic class: Loamy, mixed, frigid Lithic Argixerolls

Typical pedon: Segura very cobbly loam, in map unit 760; in an area where pebbles cover about 10 percent of the surface, cobbles cover 30 percent, and stones cover 5 percent:

A—0 to 3 inches; brown (10YR 5/3) very cobbly loam, dark brown (10YR 3/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine interstitial pores; 15 percent pebbles, 20 percent cobbles, and 5 percent stones; neutral (pH 7.2); clear smooth boundary. (1 to 4 inches thick)

Bt1—3 to 9 inches; brown (10YR 5/3) sandy clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine to medium roots; common fine and medium tubular pores; few thin clay films lining pores; 10 percent pebbles; mildly alkaline (pH 7.6); abrupt smooth boundary. (2 to 8 inches thick)

Bt2—9 to 14 inches; yellowish brown (10YR 5/4) sandy clay loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium angular blocky structure;

slightly hard, very friable, slightly sticky and slightly plastic; few very fine to medium roots; common fine and medium tubular pores; few thick clay films on faces of peds and common thin clay films lining pores; 10 percent pebbles; mildly alkaline (pH 7.8); abrupt smooth boundary. (4 to 9 inches thick)

R—14 inches; fractured quartzite.

Type location: White Pine County, Nevada; about 4 miles southwest of Alligator Ridge, on Buck Mountain; about 1,350 feet west and 2,000 feet south of the projected northeast corner of sec. 32, T. 22 N., R. 57 E.; north latitude of 39 degrees, 41 minutes, 34 seconds; west longitude of 115 degrees, 28 minutes, 46 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from summer through early fall

Soil temperature: 43 to 47 degrees F

Mollic epipedon: 7 to 14 inches thick, commonly including part or all of the Bt horizon; mollic in thin epipedons after mixing to a depth of 7 inches

Thickness of the solum and depth to bedrock: 7 to 14 inches

Reaction: Neutral to moderately alkaline

Control section:

Clay content—18 to 30 percent

Content of rock fragments—average of 10 to 35 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3

Bt horizon:

Value—4 or 5 dry, 2 or 3 moist; ranging to 6 dry in the lower part

Chroma—2 or 3; ranging to 4 in the lower part

Texture—loam, sandy clay loam, or clay loam, commonly containing rock fragments

Consistence—soft or slightly hard, very friable or friable, slightly sticky or sticky and slightly plastic or plastic

Clay content—20 to 35 percent

Content of rock fragments—10 to 35 percent

Structure—subangular or angular blocky

Selti Series

The Selti series consists of very deep, well drained soils that formed in alluvium derived from monzonite. These soils are on fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 11

inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Aridic Calcic Argixerolls

Typical pedon: Selti very stony coarse sandy loam, in map unit 361; in an area where pebbles cover about 25 percent of the surface, cobbles cover 5 percent, and stones cover 15 percent:

A—0 to 4 inches; brown (10YR 5/3) very stony coarse sandy loam, dark brown (10YR 3/3) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; weak very fine interstitial pores; 20 percent pebbles, 5 percent cobbles, and 15 percent stones; mildly alkaline (pH 7.8); abrupt smooth boundary. (2 to 6 inches thick)

Bt1—4 to 12 inches; brown (10YR 5/3) very cobbly sandy clay loam, dark brown (10YR 3/3) moist; moderate very fine and fine subangular blocky structure; hard, firm, sticky and plastic; common fine and medium roots; common fine tubular pores; common faint clay films on peds; 20 percent pebbles, 15 percent cobbles, and 10 percent stones; mildly alkaline (pH 7.8); clear smooth boundary. (5 to 12 inches thick)

Bt2—12 to 30 inches; brown (10YR 5/3) very cobbly sandy loam, dark brown (10YR 4/3) moist; moderate very fine and fine subangular blocky structure; hard, firm, sticky and plastic; common fine and medium roots; common fine tubular pores; few faint clay films bridging sand grains; 20 percent pebbles, 20 percent cobbles, and 15 percent stones; moderately alkaline (pH 8.0); clear wavy boundary. (10 to 25 inches thick)

Bk1—30 to 52 inches; light yellowish brown (10YR 6/4) extremely stony loamy coarse sand, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common medium and coarse roots; common fine tubular pores; few medium masses of soft lime; 30 percent pebbles, 20 percent cobbles, and 30 percent stones; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (15 to 30 inches thick)

Bk2—52 to 60 inches; light yellowish brown (10YR 6/4) extremely stony loamy coarse sand, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few medium roots; common fine tubular pores; few fine lime filaments; the bottom of rock fragments coated with soft lime; 30 percent pebbles, 20 percent cobbles, and 30 percent stones; violently effervescent; moderately alkaline (pH 8.2)

Type location: White Pine County, Nevada; about 12 miles southwest of Schellbourne Station; 2,640 feet

east and 1,320 feet north of the projected southwest corner of sec. 27, T. 21 N., R. 63 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and early spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Reaction: Mildly alkaline or moderately alkaline

Depth to lime: 27 to 40 inches

Mollic epipedon: 8 to 18 inches thick; after mixing of the upper 7 inches, value of less than 5.5 dry, 3.5 moist, and chroma of 3 or less moist

A horizon:

Value—4 to 6 dry, 3 or 4 moist

Chroma—2 to 4

Bt horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 to 4

Texture—very cobbly sandy clay loam or very cobbly sandy loam

Clay content—18 to 25 percent

Content of rock fragments—40 to 60 percent

Bk horizon:

Value—5 to 7 dry, 4 to 6 moist

Chroma—3 or 4

Content of rock fragments—60 to 85 percent (20 to 30 percent stones, 15 to 25 percent cobbles, and 25 to 35 percent pebbles); about a third of the pebbles are 2 to 5 mm in diameter.

Secondary lime—few fine filaments to common medium, soft masses

Shabliss Series

The Shabliss series consists of well drained soils that are shallow over a duripan. These soils formed in mixed alluvium with a thin mantle of loess high in content of volcanic ash. These soils are on fan piedmont remnants. Slopes are 0 to 15 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Haploxerollic Durorthids

Typical pedon: Shabliss gravelly loam, in map unit 455; in an area where pebbles cover about 30 percent of the surface:

A—0 to 3 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; weak thin platy structure;

soft, very friable, slightly sticky and slightly plastic; common fine roots; common very fine vesicular pores; 15 percent pebbles; slightly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary. (2 to 6 inches thick)

Bw—3 to 13 inches; pale brown (10YR 6/3) gravelly loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine and fine tubular pores; few fine, soft pockets and films of lime; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.0); clear wavy boundary. (4 to 10 inches thick)

Bqkm—13 to 55 inches; very pale brown (10YR 7/3), strongly cemented duripan with a very thin silica laminar cap and a strongly cemented matrix; light yellowish brown (10YR 6/4) moist; massive; very hard, very firm; few very fine and medium roots in fractures; few fine lime filaments; 20 percent pebbles; violently effervescent; moderately alkaline (pH 8.0); abrupt wavy boundary.

Type location: White Pine County, Nevada; in Steptoe Valley, about 12 miles south of Ely; about 1,000 feet west and 1,000 feet north of the southeast corner of sec. 23, T. 14 N., R. 64 E.; north latitude of 39 degrees, 3 minutes, 26 seconds; west longitude of 114 degrees, 44 minutes, 50 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry from early summer through early fall

Soil temperature: 47 to 55 degrees F

Depth to the base of the Bw horizon: 10 to 15 inches

Depth to the strongly cemented duripan: 10 to 20 inches

Control section:

Clay content—5 to 15 percent

Content of rock fragments—average of 0 to 25 percent

A horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3

Reaction—neutral to moderately alkaline

Bw horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—2 to 4

Consistence—soft or slightly hard, very friable or friable, nonsticky or slightly sticky and nonplastic or slightly plastic

Reaction—neutral to strongly alkaline

Texture—very fine sandy loam, silt loam, or loam; thin strata of fine sandy loam in some pedons

Other features—in some pedons, few fine, soft pockets and films of violently effervescent lime

Bq or Bkq horizon (if it occurs above the duripan):

Cementation—5 to 45 percent durinodes in a friable or brittle matrix

Texture—very fine sandy loam, silt loam, or loam; thin strata of fine sandy loam in some pedons

Bkqm horizon:

Structure—platy or massive

Consistence—very hard or extremely hard

Other features—in some pedons, two or more strongly cemented layers interbedded with weakly cemented material

Bqk, Bk, or C horizon (if it occurs below the duripan):

Clay content—0 to 10 percent

Rock fragments—in some pedons, gravelly or very gravelly horizons below the duripan

Reaction—moderately alkaline to very strongly alkaline

Cementation—in the Bqk horizon (if it occurs), 5 to 45 percent extremely hard, extremely firm, brittle, 1/8- to 1/2-inch, cylindrical durinodes in a friable or firm matrix or continuous weak silica cementation

Sheffit Series

The Sheffit series consists of very deep, moderately well drained soils that formed in mixed alluvium over lacustrine sediments. These soils are on lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Xeric Torriorthents

Typical pedon: Sheffit silt loam, in map unit 250:

An1—0 to 3 inches; light gray (10YR 7/2) silt loam, brown (10YR 4/3) moist; moderate very thick platy structure; slightly hard, very friable, very sticky and plastic; few very fine roots; many very fine vesicular pores; violently effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary. (1 to 4 inches thick)

An2—3 to 7 inches; pale brown (10YR 6/3) silty clay, brown (10YR 4/3) moist; weak thin platy structure; slightly hard, very friable, very sticky and plastic; many very fine and few fine and medium roots; many very fine vesicular pores; violently effervescent; very

strongly alkaline (pH 9.4); clear smooth boundary.
(2 to 6 inches thick)

Cnz1—7 to 23 inches; pale brown (10YR 6/3) clay, brown (10YR 4/3) moist; massive; hard, firm, very sticky and very plastic; common very fine and few fine and medium roots; common very fine and few fine vesicular pores; 0 to 10 percent weakly cemented durinodes; common fine segregated salts in the lower part of the horizon; violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.
(10 to 20 inches thick)

Cnz2—23 to 32 inches; white (2.5Y 8/2) clay, light brownish gray (2.5Y 6/2) moist; massive; hard, friable, very sticky and very plastic; common very fine and few fine and medium roots; moderate very fine vesicular pores; common fine disseminated salts on faces of peds; violently effervescent; very strongly alkaline (pH 9.2); clear smooth boundary. (6 to 12 inches thick)

Cn1—32 to 47 inches; white (2.5Y 8/2) silt loam, light brownish gray (2.5Y 6/2) moist; massive; slightly hard, very friable, sticky and plastic; common very fine and few fine roots; few very fine vesicular pores; common fine light gray (10YR 7/2) manganese stains; violently effervescent; very strongly alkaline (pH 9.0); clear smooth boundary. (10 to 20 inches thick)

Cn2—47 to 60 inches; white (5Y 8/1) silty clay loam, light olive gray (5Y 6/2) moist; massive; slightly hard, friable, sticky and plastic; common fine yellow manganese stains; violently effervescent; very strongly alkaline (pH 9.6).

Type location: White Pine County, Nevada; about 15 miles southeast of the Strawberry Ranch, in Newark Valley; about 500 feet east and 350 feet north of the southwest corner of sec. 13, T. 19 N., R. 55 E.; north latitude of 39 degrees, 30 minutes, 43 seconds; west longitude of 114 degrees, 44 minutes, 5 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and early spring, dry from late spring through fall

Soil temperature: 48 to 52 degrees F

Depth to lacustrine sediments: 15 to 30 inches

Other features: In some pedons, very thin layers of fine sandy loam below a depth of 50 inches

Control section:

Clay content—35 to 50 percent

Texture—stratified silt loam to clay

A horizon:

Value—6 to 8 dry, 4 to 6 moist

Sodium adsorption ratio (SAR)—less than 12

Other features—influenced by pyroclastics; when the moisture content is close to a saturated state, very sticky; in a moist state, slightly sticky

Cnz and Cn horizons:

Hue—2.5Y, 5Y, or 10YR

Value—6 to 8 dry, 4 to 7 moist

Chroma—1 to 3

Low chroma—in most pedons, a low-chroma matrix or common fine faint low-chroma mottles in the lower subhorizons

Structure—prismatic, angular or subangular blocky, or massive

Salinity—commonly more than 8 millimhos per cubic centimeter

Sodium adsorption ratio (SAR)—more than 20

Other features—in some pedons, common black ped coatings and high-chroma iron mottles in the substratum

Sodhouse Series

The Sodhouse series consists of well drained soils that are shallow over a duripan. These soils formed in mixed alluvium and some volcanic ash. They are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Typic Durorthids

Typical pedon: Sodhouse gravelly loam, in map unit 1821; in an area where pebbles cover about 25 percent of the surface:

A—0 to 3 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; moderate thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; few very fine and fine vesicular pores; 20 percent pebbles; slightly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary. (1 to 10 inches thick)

Bw—3 to 9 inches; pale brown (10 YR 6/3) gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine to medium roots; common fine tubular pores; 15 percent pebbles; slightly effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (3 to 18 inches thick)

Bk—9 to 14 inches; very pale brown (10YR 7/3) gravelly fine sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, nonsticky and nonplastic; few

fine and medium roots; common fine tubular pores; 25 percent pebbles; thin lime films on pebbles; as much as 1/4-inch pendants of lime on the lower side of the larger pebbles; few soft, fine masses of lime; strongly effervescent; moderately alkaline (pH 8.0); abrupt irregular boundary. (0 to 8 inches thick)

Bqkm—14 to 25 inches; white (10YR 8/2), indurated duripan, pale brown (10YR 6/3) moist; massive; pebbles and cobbles imbedded in the top 2 inches; clear wavy boundary. (10 to 24 inches thick)

2C—25 to 60 inches; very pale brown (10YR 7/3) very gravelly loamy coarse sand, brown (10YR 5/3) moist; massive; hard, firm, nonsticky and nonplastic; very hard and very firm discontinuous lenses 1 to 3 inches thick; 60 percent pebbles and 5 percent cobbles; strongly effervescent; moderately alkaline (pH 8.2).

Type location: White Pine County, Nevada; about 4 miles northwest of Black Point; about 1,800 feet west and 1,000 feet south of the northeast corner of sec. 20, T. 14 N., R. 56 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist for short periods in winter and spring, dry in summer and fall

Soil temperature: 47 to 53 degrees F

Depth to an indurated duripan: 14 to 20 inches

Thickness of the indurated duripan: 10 to 24 inches

Depth to the 2C horizon: 25 to 44 inches

Reaction: Moderately alkaline or strongly alkaline, the pH generally increasing with increasing depth

Other features: In some pedons, durinodes and lime accumulations in subhorizons directly above the duripan

Control section:

Clay content—8 to 15 percent

A horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3

Other features—dominantly noneffervescent, but in some pedons slightly effervescent because of lime recharge from dust

Bw horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 or 4

Texture—very fine sandy loam, fine sandy loam, loam, or gravelly loam

Consistence—slightly hard or hard, friable or firm

Content of rock fragments—5 to 35 percent, mainly pebbles

Bkqm horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 to 7 moist

Chroma—2 to 4

Structure—platy or massive

2C horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 or 4

Texture—extremely gravelly sandy loam, gravelly sandy loam, very gravelly loamy sand, or very gravelly loamy coarse sand

Consistence—slightly hard or hard, friable or firm

Sonoma Series

The Sonoma series consists of very deep, poorly drained soils that formed in silty alluvium derived from mixed rocks and some volcanic ash. These soils are on axial-stream flood plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Aeric Fluvaquents

Typical pedon: Sonoma silt loam, in map unit 1020:

A—0 to 10 inches; light gray (10YR 6/1) silt loam, dark gray (10YR 4/1) moist; moderate thin and medium platy structure; soft, very friable, sticky and plastic; many very fine to medium roots; many very fine and fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 10 inches thick)

AC—10 to 17 inches; grayish brown (10YR 5/2) silty clay loam, dark gray (10YR 4/1) moist; moderate thin and medium platy structure; slightly hard, firm, sticky and plastic; common fine and medium roots; many very fine to medium tubular pores; violently effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary. (3 to 12 inches thick)

C—17 to 24 inches; light brownish gray (10YR 6/2) silty clay loam, dark grayish brown (10YR 4/2) moist; few fine faint reddish yellow (7.5YR 7/6) mottles; moderate coarse prismatic structure; slightly hard, firm, sticky and plastic; few very fine to medium roots; many very fine to medium tubular pores; violently effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary. (7 to 35 inches thick)

Ab—24 to 33 inches; grayish brown (10YR 5/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; dark gray (10YR 5/1) pockets and few fine distinct reddish yellow (7.5YR 7/6) mottles; moderate fine subangular blocky structure; slightly hard, firm, slightly sticky and

plastic; few very fine to coarse roots; many very fine to medium tubular pores; violently effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary. (0 to 12 inches thick)

C'1—33 to 47 inches; light brownish gray (10YR 6/2) silty clay loam, grayish brown (10YR 5/2) moist; few fine distinct reddish yellow (7.5YR 6/6) mottles; moderate fine subangular blocky structure; hard, firm, sticky and plastic; few very fine to coarse roots; common very fine to medium tubular pores; few fine, irregularly shaped lime concretions; few soft lime filaments; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (10 to 14 inches thick)

C'2—47 to 57 inches; light gray (10YR 7/2) silty clay loam, grayish brown (10YR 5/2) moist; few fine distinct reddish yellow (7.5YR 6/6) mottles; moderate fine subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; common very fine and fine tubular pores; few fine, irregularly shaped lime concretions; few soft lime filaments; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (5 to 10 inches thick)

C'3—57 to 65 inches; light gray (10YR 7/1) silty clay loam, light brownish gray (10YR 6/2) moist; common fine distinct reddish yellow (7.5YR 6/6) mottles; moderate fine subangular blocky structure; very hard, firm, sticky and plastic; few very fine roots; common very fine and fine tubular pores; few fine, irregularly shaped lime concretions; common medium, soft masses of lime; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 10 feet south of the Elko County line, near Hunnington Creek; about 1,500 feet west and 400 feet south of the northeast corner of sec. 22, T. 26 N., R. 55 E., on Mount Diablo meridian; north latitude of 40 degrees, 7 minutes, 39 seconds; west longitude of 115 degrees, 45 minutes, 55 seconds

Range in Characteristics

Soil moisture: Unless drained, saturated from spring through early summer; the water table below a depth of 40 inches during the rest of the year

Soil temperature: 49 to 53 degrees F

Depth to a buried A horizon (if it occurs): 24 to 55 inches

Carbonates: Calcium carbonate equivalent of 3 to 12 percent throughout the profile; strongly effervescent or violently effervescent

Control section:

Clay content—25 to 35 percent

Texture—stratified silt loam to silty clay loam; strata of clay or silty clay in some pedons

A horizon:

Hue—2.5Y or 10YR

Value—5 or 6 dry, 3 to 5 moist; not darker than 5.5 dry and 3.5 moist after mixing of the upper 7 inches

Chroma—1 or 2

Reaction—moderately alkaline to very strongly alkaline; in the buried A horizon, moderately alkaline or strongly alkaline

C horizon:

Hue—10YR to 5Y

Value—6 to 8 dry, 3 to 6 moist

Chroma—dominantly 1 or 2; in some pedons, subhorizons with chroma of 3 or 4

Structure—platy, prismatic, granular, subangular blocky, or massive

Consistence—slightly hard to very hard

Reaction—moderately alkaline to very strongly alkaline

Other features—in most pedons, freshwater crustacean shells and lime concretions 1/4 to 1/2 inch in diameter

Stewval Series

The Stewval series consists of shallow and very shallow, well drained soils that formed in residuum and colluvium derived from andesite. These soils are on hills and mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 51 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids

Typical pedon: Stewval very stony fine sandy loam, in map unit 660; in an area where pebbles cover about 35 percent of the surface, cobbles cover 30 percent, and stones cover 10 percent:

A—0 to 2 inches; pale brown (10YR 6/3) very stony fine sandy loam, brown (10YR 4/3) moist; moderate medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and fine vesicular pores; 35 percent pebbles, 10 percent cobbles, and 5 percent stones; slightly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (1 to 3 inches thick)

Bt1—2 to 6 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; hard, firm, sticky and plastic; common fine and medium roots; common fine and medium tubular pores; 30 percent pebbles and 10

percent cobbles; thin coatings of lime on the underside of rock fragments; thin nearly continuous clay films on faces of peds; slightly effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (3 to 7 inches thick)

Bt2—6 to 10 inches; pale brown (10YR 6/3) very gravelly clay loam, brown (10YR 4/3) moist, weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common fine tubular pores; 35 percent pebbles, 10 percent cobbles, and 5 percent stones; thin patchy clay films on faces of peds; fine pendants of silica and lime on the lower side of rock fragments; strongly effervescent; moderately alkaline (pH 8.0); abrupt irregular boundary. (0 to 4 inches thick)

R—10 inches; andesite.

Type location: White Pine County, Nevada; about 2 miles northwest of Black Point; 1,500 feet west and 1,300 feet north of the southeast corner of sec. 32, T. 14 N., R. 56 E.

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall, except for 10 to 20 cumulative days between July and October because of convection storms

Soil temperature: 53 to 59 degrees F

Depth to bedrock: 4 to 14 inches

Reaction: Mildly alkaline or moderately alkaline

Effervescence: Slightly effervescent to violently effervescent

Control section:

Clay content—18 to 27 percent

Content of rock fragments—35 to 55 percent pebbles, 0 to 10 percent cobbles, and 0 to 15 percent stones

A horizon:

Hue—10YR or 7.5YR

Value—5 to 6 dry, 3 or 4 moist

Chroma—2 or 3

Bt horizon:

Hue—10YR, 7.5YR, or 5YR

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 to 4

Texture of the fraction less than 2 mm in size—loam or clay loam

Structure—subangular blocky or granular

Other features—silica and lime pendants in some pedons

Suak Series

The Suak series consists of moderately deep, well drained soils that formed in residuum and colluvium derived from andesite, quartzite, and conglomerate. These soils are on the side slopes of mountains. Slopes are 8 to 75 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Typic Argixerolls

Typical pedon: Suak very stony loam, in map unit 226; in an area where pebbles cover about 35 percent of the surface, cobbles cover 10 percent, and stones cover 10 percent:

A1—0 to 3 inches; dark grayish brown (10YR 4/2) very stony loam, very dark brown (10YR 2/2) moist; weak very thin platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; 35 percent pebbles, 10 percent cobbles, and 10 percent stones; neutral (pH 7.2); clear smooth boundary. (2 to 4 inches thick)

A2—3 to 10 inches; dark grayish brown (10YR 4/2) very cobbly loam, very dark grayish brown (10YR 3/2) moist; weak very fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; 30 percent pebbles and 20 percent cobbles; neutral (pH 7.2); clear wavy boundary. (0 to 12 inches thick)

Bt1—10 to 17 inches; brown (10YR 5/3) extremely gravelly loam, dark brown (10YR 3/3) moist; weak very fine subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine and few fine and medium roots; common very fine tubular and interstitial pores; 60 percent pebbles and 5 percent cobbles; few thin clay films bridging sand grains and lining pores; mildly alkaline (pH 7.4); clear wavy boundary. (3 to 12 inches thick)

Bt2—17 to 25 inches; yellowish brown (10YR 5/4) extremely gravelly loam, dark yellowish brown (10YR 3/4) moist; weak very fine subangular blocky structure; slightly hard, friable, sticky and plastic; few very fine roots; common very fine tubular and interstitial pores; 55 percent pebbles and 10 percent cobbles; common moderately thick clay films bridging sand grains and lining pores; mildly alkaline (pH 7.4); abrupt irregular boundary. (4 to 12 inches thick)

R—25 inches; slightly fractured, hard quartzite bedrock.

Type location: White Pine County, Nevada; 13 miles

south of Gallagher Gap, in the Duck Creek Range; about 1,500 feet west and 400 feet north of the southeast corner of sec. 26, T. 17 N., R. 64 E.; north latitude of 39 degrees, 18 minutes, 18 seconds; west longitude of 114 degrees, 44 minutes, 9 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from late summer through fall, moist from winter through early spring

Soil temperature: 42 to 47 degrees F

Mollic epipedon: 8 to 17 inches thick, including the upper part of the Bt horizon

Depth to bedrock: 20 to 40 inches

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

Bt horizon:

Value—4 to 6 dry, 3 or 4 moist

Chroma—3 or 4

Texture—extremely cobbly or extremely gravelly loam

Clay content—20 to 27 percent

Content of rock fragments—60 to 85 percent

Other features—in some pedons, faint, thin, soft lime coatings on the underside of rock fragments

Sycomat Series

The Sycomat series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on fan skirts and fan piedmont remnants. Slopes are 0 to 4 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Duric Calciorthids

Typical pedon: Sycomat sandy loam, in map unit 1120:

A—0 to 4 inches; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist; moderate medium platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (2 to 6 inches thick)

Bk—4 to 11 inches; pale brown (10YR 6/3) sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine tubular pores; violently effervescent; strongly alkaline (pH 8.8); clear wavy boundary. (6 to 21 inches thick)

Bqk1—11 to 15 inches; pale brown (10YR 6/3) and light

brown (7.5YR 6/4) sandy loam, brown (10YR 4/3 and 7.5YR 5/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine to medium roots; common very fine tubular pores; weak discontinuous silica cementation; 20 percent durinodes 15 to 30 mm in diameter; 5 percent pebbles; violently effervescent; very strongly alkaline (pH 9.6); abrupt wavy boundary. (0 to 15 inches thick)

Bqk2—15 to 31 inches; white (10YR 8/2) and pink (7.5YR 7/4), continuously weakly silica cemented sandy loam, pale brown (10YR 6/3) and brown (7.5YR 5/4) moist; massive; hard, friable, slightly brittle, slightly sticky and slightly plastic; few very fine and fine roots; few very fine tubular pores; 30 percent durinodes 15 to 30 mm in diameter; violently effervescent; very strongly alkaline (pH 9.6); clear wavy boundary. (10 to 20 inches thick)

Bqk3—31 to 44 inches; very pale brown (10YR 7/3) and pink (7.5YR 7/4) coarse sandy loam, brown (10YR 5/3 and 7.5YR 5/4) moist; massive; hard, friable, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; discontinuous weak silica cementation; 5 percent pebbles; violently effervescent; very strongly alkaline (pH 9.6); clear wavy boundary. (0 to 13 inches thick)

2C—44 to 60 inches; variegated light brownish gray (10YR 6/2) and light brown (7.5YR 6/4), stratified sandy loam to sand, brown (10YR 5/3 and 7.5YR 5/4) moist; massive; slightly hard, friable, nonsticky and slightly plastic; few very fine roots; common very fine interstitial pores; strongly effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 8 miles southwest of Lund, in the White River Valley; about 1,000 feet east and 200 feet north of the southwest corner of sec. 2, T. 10 N., R. 61 E.; north latitude of 38 degrees, 44 minutes, 57 seconds; west longitude of 115 degrees, 5 minutes, 35 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in some parts for short periods in winter and spring and for 10 to 20 cumulative days from July through October following convection storms

Soil temperature: 47 to 53 degrees F

Depth to the calcic horizon: 2 to 6 inches

Depth to continuous weak silica cementation: 10 to 23 inches

Control section:

Clay content—5 to 18 percent

Content of rock fragments—0 to 35 percent

A horizon:

Value—5 or 6 dry, 4 or 5 moist
 Chroma—2 or 3

Bk horizon:

Value—6 or 7 dry, 4 to 6 moist
 Chroma—3 or 4
 Clay content—5 to 18 percent
 Content of rock fragments—0 to 35 percent
 Structure—weak or moderate
 Consistence—very friable or friable, nonsticky or slightly sticky
 Reaction—moderately alkaline to very strongly alkaline
 Other features—no lime-cemented soil masses in some pedons
 Texture of the fine-earth fraction—sandy loam, loam, or silt loam

Bqk horizon:

Hue—10YR or 7.5YR
 Value—6 to 8 dry, 4 to 6 moist
 Chroma—2 to 4
 Texture of the fine-earth fraction—coarse sandy loam, sandy loam, or loam
 Clay content—5 to 18 percent
 Content of rock fragments—0 to 35 percent
 Structure—medium or coarse subangular blocky or platy or massive
 Consistence—slightly hard or hard, very friable to slightly brittle, nonsticky or slightly sticky and nonplastic or slightly plastic
 Calcium carbonate equivalent—15 to 30 percent in the fraction less than 20 mm in size
 Reaction—moderately alkaline to very strongly alkaline
 Other features—continuous weak silica and lime cementation with 20 to 80 percent weakly to strongly cemented plates and nodes; in some pedons, subhorizons that are discontinuously silica and lime cemented

2C horizon:

Hue—10YR or 7.5YR
 Value—6 or 7 dry, 5 or 6 moist
 Chroma—2 to 4
 Texture of the fine-earth fraction—stratified sandy loam to sand; average of loamy sand or sand
 Clay content—2 to 5 percent
 Content of rock fragments—average of 35 to 60 percent, mainly pebbles
 Structure—massive or single grained
 Consistence—loose or slightly hard, friable
 Other features—in some pedons, thin strata of nongravely sand or stratified sandy loam to sand

Tecomar Series

The Tecomar series consists of shallow, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on the side slopes of mountains and hills. Slopes are 8 to 50 percent. The mean annual precipitation is about 12 inches, and the mean annual air temperature is about 45 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic Lithic Xerollic Calciorthids

Typical pedon: Tecomar extremely gravelly silt loam, in map unit 124; in an area where pebbles cover about 60 percent of the surface, cobbles cover 10 percent, and stones cover 10 percent:

A1—0 to 3 inches; pale brown (10YR 6/3) extremely gravelly silt loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and few fine roots; common very fine tubular pores; 50 percent pebbles and 15 percent cobbles; violently effervescent (55 percent calcium carbonate); moderately alkaline (pH 8.4); clear smooth boundary. (1 to 4 inches thick)

A2—3 to 11 inches; pale brown (10YR 6/3) extremely cobbly silt loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and few fine roots; common very fine tubular pores; 35 percent pebbles and 30 percent cobbles; violently effervescent (55 percent calcium carbonate); strongly alkaline (pH 8.8); clear smooth boundary. (2 to 10 inches thick)

Bk—11 to 18 inches; pale brown (10YR 6/3) extremely cobbly silt loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine tubular pores; many thin to thick lime coatings on rock fragments; few fine, soft masses of lime; 40 percent pebbles and 30 percent cobbles; violently effervescent (60 percent calcium carbonate); strongly alkaline (pH 9.0); clear wavy boundary. (4 to 17 inches thick)

R—18 inches; hard limestone bedrock.

Type location: White Pine County, Nevada; about 1 mile west of Ely, in the Egan Range; about 2,300 feet west and 300 feet south of the northeast corner of sec. 18, T. 16 N., R. 63 E.; north latitude of 39 degrees, 15 minutes, 25 seconds; west longitude of 114 degrees, 55 minutes, 21 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is

above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Depth to bedrock: 10 to 20 inches

Depth to the calcic horizon: 4 to 14 inches

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Control section:

Clay content—20 to 27 percent

Content of rock fragments—50 to 80 percent, mainly pebbles and cobbles and some stones

Calcium carbonate equivalent—40 to 60 percent in the fraction less than 20 mm in size

A horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3

Bk horizon:

Value—6 to 8 dry, 4 to 7 moist

Chroma—3 or 4

Structure—subangular blocky or massive

Consistence—slightly sticky or sticky and slightly plastic or plastic

Tosser Series

The Tosser series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on beach plains. Slopes are 0 to 8 percent. The average annual precipitation is about 10 inches, and the mean annual air temperature is about 49 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Xerollic Calciorthids

Typical pedon: Tosser loam, in map unit 930; in an area where pebbles cover about 35 percent of the surface:

A1—0 to 1 inch; pale brown (10YR 6/3) loam, yellowish brown (10YR 5/4) moist; moderate fine subangular block structure parting to moderate thin platy; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; few fine vesicular pores; 5 percent pebbles; calcium carbonate equivalent of less than 1 percent; slightly effervescent; moderately alkaline; (pH 8.4); clear smooth boundary. (1 to 4 inches thick)

A2—1 to 3 inches; pale brown (10YR 6/3) loam, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure parting to moderate thin platy; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; few fine vesicular pores; 3 percent pebbles; calcium carbonate equivalent of less than 1 percent; strongly

effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (2 to 8 inches thick)

A3—3 to 8 inches; pale brown (10YR 6/3) loam, yellowish brown (10YR 5/4) moist; strong medium platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine to medium roots; few very fine interstitial pores; 5 percent pebbles; very few clay films bridging sand grains; calcium carbonate equivalent of less than 1 percent; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (0 to 5 inches thick)

Bkq1—8 to 16 inches; light yellowish brown (10YR 6/4) very gravelly loam, yellowish brown (10YR 5/4) moist; weak fine and medium subangular blocky structure; slightly hard, firm, nonsticky and nonplastic; few very fine and fine roots; few fine interstitial pores; 55 percent pebbles; common thin lime and silica coatings on the underside of pebbles; calcium carbonate equivalent of 10 percent; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (8 to 18 inches thick)

Bkq2—16 to 24 inches; light brownish gray (10YR 6/2) extremely gravelly loamy sand, yellowish brown (10YR 5/4) moist; massive; hard, firm, nonsticky and nonplastic; few very fine and fine roots; few very fine tubular pores; weak continuous lime cementation; many thick lime coatings and few thin silica coatings on pebbles; 70 percent pebbles; calcium carbonate equivalent of 35 percent; violently effervescent; strongly alkaline (pH 8.5); abrupt wavy boundary. (8 to 20 inches thick)

2Bk—24 to 60 inches; light yellowish brown (10YR 6/4), stratified extremely gravelly loamy coarse sand and extremely gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; hard, friable, nonsticky and nonplastic; few very fine roots; few vesicular pores; few pockets of horizontal and vertical accumulations of lime; 70 percent pebbles; many thick lime coatings on pebbles; violently effervescent; strongly alkaline (pH 8.5).

Type location: White Pine County, Nevada; about 4 miles south of U.S. Highway 50, in Jakes Valley; about 2,000 feet east and 1,900 feet south of the northwest corner of sec. 17, T. 17 N., R. 60 E.; north latitude of 39 degrees, 20 minutes, 40 seconds; west longitude of 115 degrees, 14 minutes, 40 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 50 to 53 degrees F

Depth to the calcic horizon: 7 to 12 inches

Control section:

Clay content—average of 2 to 8 percent
Content of rock fragments—35 to 75 percent

A horizon:

Value 6 or 7 dry, 4 or 5 moist
Chroma—2 to 4
Reaction—moderately alkaline or strongly alkaline
Carbonates—slightly calcareous or moderately calcareous

B horizon:

Hue—10YR or 2.5Y
Value—5 or 6 dry, 4 or 5 moist
Chroma—2 to 4
Texture of the fraction less than 2 mm in size—
dominantly loamy sand or sand; in some pedons,
thin subhorizons of loam
Content of rock fragments—35 to 75 percent
Reaction—moderately alkaline to very strongly alkaline
Carbonates—slightly calcareous to strongly calcareous

Tulase Series

The Tulase series consists of very deep, well drained soils that formed in silty alluvium derived from mixed rocks and some volcanic ash. These soils are on inset fans and fan skirts and in drainageways on hills. Slopes are 0 to 8 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Coarse-silty, mixed (calcareous), mesic Durorthidic Xeric Torriorthents

Typical pedon: Tulase silt loam, in map unit 455:

A—0 to 2 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine and medium roots; many very fine vesicular and few fine tubular pores; many thin lime coatings and common lime and silica pendants on pebbles; 5 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (2 to 10 inches thick)

C—2 to 35 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine to medium roots; common very fine and fine tubular pores; few thin lime coatings and common lime and silica pendants on pebbles; 5 percent pebbles; violently

effervescent; strongly alkaline (pH 8.6); clear wavy boundary. (6 to 25 inches thick)

Cq—35 to 55 inches; very pale brown (10YR 7/3) silt loam, pale brown (10YR 6/3) moist; massive; hard, friable, nonsticky and nonplastic; few very fine roots; 30 percent weak and 5 percent strong discontinuous lime cementation; few thin lime coatings and common lime and silica pendants on pebbles; 5 percent pebbles; violently effervescent; strongly alkaline

(pH 8.8); clear wavy boundary. (6 to 20 inches thick)

Cqk—55 to 60 inches; very pale brown (10YR 7/3) silt loam, pale brown (10YR 6/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; 20 percent durinodes 5 to 15 mm in diameter; 10 percent weak discontinuous silica cementation; few very fine filaments of lime; few thin lime coatings and few lime and silica pendants on pebbles; 5 percent pebbles; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 10 miles southeast of Ely, along U.S. Highways 6, 50, and 93, in Steptoe Valley; about 2,200 feet west and 1,200 feet south of the projected northeast corner of sec. 34, T. 15 N., R. 64 E.; north latitude of 39 degrees, 7 minutes, 30 seconds; west longitude of 114 degrees, 46 minutes, 12 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Depth to the Cq horizon: 11 to 35 inches

Control section:

Content of rock fragments—0 to 5 percent pebbles

A horizon:

Value—6 or 7 dry, 4 or 5 moist
Chroma—2 or 3

C horizon:

Value—4 or 5 moist
Structure—prismatic or massive
Consistence—soft to hard, nonsticky or slightly sticky and nonplastic or slightly plastic

Cq and Cqk horizons:

Texture—silt loam or very fine sandy loam
Consistence—soft to hard, very friable or friable, nonsticky or slightly sticky and nonplastic or slightly plastic
Silica cementation—20 to 50 percent durinodes; in most pedons, as much as 30 percent discontinuous silica-lime cementation in the Cqk horizon

Other features—in some pedons, no filaments of gypsum

Tusel Series

The Tusel series consists of deep, well drained soils that formed in residuum and colluvium derived from quartzite, conglomerate, and, in some areas, andesite. These soils are on the side slopes of mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 17 inches, and the mean annual air temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed Argic Pachic Cryoborolls

Typical pedon: Tusel cobbly loam, in map unit 226; in an area where pebbles cover about 50 percent of the surface:

- A1—0 to 3 inches; dark grayish brown (10YR 4/2) cobbly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and few fine roots; common very fine tubular pores; 15 percent pebbles and 15 percent cobbles; neutral (pH 7.2); clear smooth boundary. (2 to 10 inches thick)
- A2—3 to 13 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; common very fine tubular pores; 30 percent pebbles; neutral (pH 7.2); clear smooth boundary. (0 to 13 inches thick)
- 2Bt1—13 to 20 inches; brown (10YR 4/3) extremely gravelly sandy clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; common very fine tubular pores; few faint clay films on faces of peds; 60 percent pebbles and 10 percent cobbles; neutral (pH 7.2); clear smooth boundary. (0 to 12 inches thick)
- 2Bt2—20 to 42 inches; brown (7.5YR 5/4) extremely gravelly clay loam, dark brown (7.5YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and few fine roots; common very fine tubular pores; few faint clay films on faces of peds; 50 percent pebbles, 10 percent cobbles, and 5 percent stones; neutral (pH 7.2); clear wavy boundary. (12 to 25 inches thick)
- 3R—42 inches; highly fractured, jointed quartzite bedrock that has soil in fractures.

Type location: White Pine County, Nevada; about 12 miles south of Gallagher Gap, in the Duck Creek Range; about 500 feet east and 2,300 feet south of the projected northwest corner of sec. 12, T. 17 N., R. 64 E.; north latitude of 39 degrees, 18 minutes, 46 seconds; west longitude of 114 degrees, 44 minutes, 53 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from midsummer through midfall, moist from late fall through early summer

Soil temperature: 43 to 47 degrees F

Average summer soil temperature: 58 to 59 degrees F

Depth to bedrock: 40 to more than 80 inches

Depth to the base of the Bt horizon: 36 to more than 50 inches

Mollic epipedon: 16 to 22 inches thick, including the upper part of the argillic horizon in some pedons

Reaction: Slightly acid or neutral

Control section:

Clay content—25 to 35 percent

Content of rock fragments—50 to 75 percent, mainly pebbles

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3

2Bt horizon:

Hue—10YR or 7.5YR

Value—4 to 6 dry, 3 or 4 moist

Chroma—2 to 4

Texture—very gravelly or extremely gravelly sandy clay loam or very gravelly or extremely gravelly clay loam with 40 to 60 percent sand

Clay content—average of 25 to 35 percent

Content of rock fragments—40 to 60 percent pebbles, 10 to 25 percent cobbles, and 0 to 10 percent stones

Consistence—slightly sticky or sticky and slightly plastic or plastic

Structure—weak to strong subangular or angular blocky; in some pedons, lower subhorizons that are massive

Unsel Series

The Unsel series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on fan piedmont remnants and fan skirts. Slopes are 0 to 8 percent. The mean annual precipitation is about 6 inches, and the mean annual air temperature is about 53 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Duric Haplargids

Typical pedon: Unsel gravelly fine sandy loam, in map unit 1460; in an area where pebbles cover about 25 percent of the surface:

- A—0 to 4 inches; light gray (10YR 7/2) gravelly fine sandy loam, dark grayish brown (10YR 4/2) moist; weak thin and medium platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine and fine vesicular pores; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (2 to 8 inches thick)
- Bt—4 to 9 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common fine tubular pores; common thin clay films on faces of peds and lining pores; 20 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (2 to 8 inches thick)
- Btk—9 to 14 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common fine tubular pores; few thin clay films on faces of peds and lining pores; 25 percent pebbles; common medium, soft masses of lime; violently effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary. (0 to 8 inches thick)
- Bqk—14 to 22 inches; pale brown (10YR 6/3) gravelly sandy loam, brown (10YR 4/3) moist; massive; soft to very hard, very friable to brittle, slightly sticky and slightly plastic; common very fine and fine roots in pockets; few fine tubular pores; strong discontinuous silica and lime cementation; 30 percent pebbles; common medium, soft masses of lime; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (6 to 24 inches thick)
- 2C—22 to 60 inches; pale brown (10YR 6/3) very gravelly loamy sand with pockets of gravelly loam; brown (10YR 4/3) moist; massive; hard, friable, nonsticky and nonplastic; few fine roots in pockets; many fine to coarse interstitial pores; weak continuous silica and lime cementation; 50 percent pebbles and 5 percent cobbles; 25 percent pebbles in the pockets of gravelly loam; violently effervescent; strongly alkaline (pH 8.8).

Type location: White Pine County, Nevada; about 10 miles south of Lund, in the White River Valley; about 400 feet east and 800 feet north of the projected southwest corner of sec. 18, T. 10 N., R. 62 E.; north latitude of 38 degrees, 43 minutes, 19

seconds; west longitude of 115 degrees, 3 minutes, 29 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in some part for short periods from winter through early spring and for 10 to 20 cumulative days from July through October because of convection storms

Soil temperature: 53 to 59 degrees F

Depth to the Bqk horizon: 10 to 22 inches

Depth to the 2C horizon: 20 to 36 inches

Control section:

Clay content—27 to 35 percent

Content of rock fragments—15 to 30 percent

Effervescence—noneffervescent to violently effervescent

A horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4 dry or moist

Reaction—moderately alkaline to very strongly alkaline

Bt horizon:

Value—5 to 7 dry, 3 to 6 moist

Chroma—2 to 4

Clay content—27 to 35 percent

Texture of the fine-earth fraction—clay loam or sandy clay loam

Content of rock fragments—15 to 30 percent

Structure—weak or moderate, fine or medium subangular blocky; weak medium or coarse prismatic; or massive

Reaction—mildly alkaline to strongly alkaline

Bqk horizon:

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 to 4

2C horizon:

Value—6 to 8 dry, 3 to 5 moist

Chroma—2 to 4

Content of rock fragments—50 to 70 percent

Upatad Series

The Upatad series consists of shallow, well drained soils that formed in residuum and colluvium derived from andesite. These soils are on the side slopes of hills and mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 14 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Argixerolls

Typical pedon: Upatad very gravelly silt loam, in map unit 760; in an area where pebbles cover about 40 percent of the surface and cobbles cover 10 percent:

- A—0 to 3 inches; grayish brown (10YR 5/2) very gravelly silt loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine and fine and few medium vesicular pores; 35 percent pebbles; noneffervescent; mildly alkaline (pH 7.6); clear smooth boundary. (0 to 4 inches thick)
- Bt—3 to 8 inches; brown (10YR 5/3) gravelly silt loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; few faint clay films on faces of peds; 15 percent pebbles; a noneffervescent matrix; mildly alkaline (pH 7.8); clear smooth boundary. (0 to 6 inches thick)
- Btq—8 to 12 inches; brown (10YR 5/3) very gravelly silty clay loam, dark brown (10YR 3/3) moist; weak fine angular blocky structure parting to moderate medium subangular blocky; slightly hard, friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; few faint clay films coating faces of peds and pores; 10 percent hard and firm discontinuous silica cementation; 10 percent fine silica concretions; durinodes; few thin lime coatings and pendants on the underside of rock fragments; 25 percent pebbles and 15 percent cobbles; noneffervescent matrix; moderately alkaline (pH 8.0); clear wavy boundary. (4 to 10 inches thick)
- 2Btk—12 to 15 inches; brown (10YR 5/3) extremely cobbly loam, brown and dark brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; few faint clay films on faces of peds; lime and silica pendants, 3 to 10 mm thick, on the underside of rock fragments; few thin, soft lime coatings on rock fragments; 40 percent pebbles and 35 percent cobbles; violently effervescent; mildly alkaline (pH 7.8); abrupt wavy boundary. (3 to 6 inches thick)
- 2R—15 inches; hard, unfractured andesite.

Type location: White Pine County, Nevada; about 3 miles west of Robinson Summit; about 1,300 feet north and 2,500 feet east of the southwest corner of sec. 20, T. 18 N., R. 61 E.; north latitude of 39 degrees, 24 minutes, 38 seconds; west longitude of 115 degrees, 8 minutes, 00 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is

above 41 degrees F; moist in winter and spring, dry from June through October

Soil temperature: 47 to 52 degrees F

Depth to bedrock: 14 to 20 inches

Mollic epipedon: 8 to 16 inches thick, including the upper part of the argillic horizon

Control section:

Clay content—27 to 35 percent

Content of rock fragments—35 to 60 percent (20 to 50 percent pebbles and 10 to 40 percent cobbles)

Reaction—mildly alkaline or moderately alkaline

A horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3

Bt and Btq horizons:

Structure—weak or moderate, fine or medium angular or subangular blocky

Concretions—5 to 15 percent fine to coarse, irregular silica concretions

2Btk horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 to 4

Structure—weak or moderate, fine or medium subangular blocky

Other features—many thin to thick lime and silica pendants on the underside of rock fragments; few or common fine or medium, soft masses of lime on the underside of rock fragments

Urmafot Series

The Urmafot series consists of well drained soils that are shallow to a duripan. These soils formed in alluvium derived from mixed rocks. They are on fan piedmont remnants and ballenas. Slopes are 2 to 30 percent. The mean annual precipitation is about 12 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Orthodic Durixerolls

Typical pedon: Urmafot gravelly loam, in map unit 1282:

- A1—0 to 3 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine to coarse roots; many fine to coarse roots; many very fine and fine vesicular pores; few thin lime pendants on the underside of pebbles; 15 percent pebbles; strongly effervescent; moderately alkaline

(pH 8.2); clear smooth boundary. (1 to 5 inches thick)

A2—3 to 8 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular pores; common thin lime pendants; 20 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 7 inches thick)

Bk—8 to 14 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular pores; many thin lime pendants; 25 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (0 to 10 inches thick)

2Bqkm1—14 to 26 inches; strongly cemented duripan with a discontinuous laminar cap 1 to 3 mm thick; massive; very hard, very firm, brittle; few very fine roots; few very fine irregular pores; many thin to thick lime and silica pendants; 50 percent pebbles and 20 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (0 to 13 inches thick)

2Bqkm2—26 to 32 inches; white (10YR 8/2), indurated duripan with a continuous silica laminar cap 2 to 3 mm thick; massive; extremely hard, extremely firm; few very fine roots; few very fine irregular pores; many thin lime and silica pendants on the underside of pebbles; few soft lime coatings on rock fragments; 50 percent pebbles and 20 percent cobbles; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (4 to 10 inches thick)

3Bqk—32 to 60 inches; very pale brown (10YR 7/3), stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam, brown (10YR 5/3) moist; massive; very hard, very firm, nonsticky and nonplastic; common very fine irregular pores; 50 percent lime and silica cementation; common thin lime pendants on the underside of pebbles and cobbles; 50 percent pebbles and 20 percent cobbles; violently effervescent; moderately alkaline (pH 8.4).

Type location: White Pine County, Nevada; about 12 miles south of Ely; about 600 feet east and 300 feet south of the northwest corner of sec. 13, T. 14 N., R. 63 E.; north latitude of 39 degrees, 5 minutes, 2 seconds; west longitude of 114 degrees, 51 minutes, 5 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is

above 41 degrees F; moist in winter and spring, dry from summer through midfall

Soil temperature: 47 to 52 degrees F

Depth to a duripan: 9 to 20 inches

Mollic epipedon: 7 to 12 inches thick

Control section

Clay content—18 to 27 percent

Content of rock fragments—15 to 35 percent

A horizon:

Value—5 or 6 dry, 3 or 4 moist; after mixing, average of less than 5.5 dry and 3.5 moist

Bk horizon (if it occurs):

Chroma—3 or 4

3Bqk horizon:

Clay content—5 to 15 percent

Content of rock fragments—55 to 80 percent pebbles, 5 to 25 percent cobbles, and less than 5 percent stones

Uwell Series

The Uwell series consists of very deep, moderately well drained soils that formed in alluvium derived from mixed rocks over lacustrine sediments. These soils are on alluvial flats, inset fans, and lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 8 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Durorthidic Xeric Torriorthents

Typical pedon: Uwell silt loam, in map unit 603:

A—0 to 3 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; common fine interstitial and tubular pores; 5 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (2 to 4 inches thick)

Bk—3 to 16 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; common fine interstitial pores; few weak durinodes; 10 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary. (10 to 16 inches thick)

2Bqk—16 to 26 inches; white (5Y 8/2) silt loam, pale olive (5Y 6/3) moist; weak and moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine to

medium roots; common fine tubular and interstitial pores; few filaments and soft masses of lime; common fine and medium durinodes; 5 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary. (8 to 12 inches thick)

3B' k1—26 to 48 inches; light olive gray (5Y 6/2) silty clay loam, olive (5Y 5/3) moist; moderate coarse prismatic structure; slightly hard, friable, sticky and plastic; few very fine to medium roots; moderate fine tubular pores; few fine mottles; violently effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary. (11 to 33 inches thick)

3B' k2—48 to 60 inches; light olive gray (5Y 6/2) silty clay, olive (5Y 5/3) moist; strong medium and coarse prismatic structure parting to strong medium angular blocky; hard, friable, sticky and plastic; few fine tubular pores; violently effervescent; strongly alkaline (pH 9.0). (8 to 16 inches thick)

Type location: White Pine County, Nevada; about 2 miles south of Hunter Point; in an unsectionalized area about 600 feet north and 2,400 feet west of the projected southeast corner of sec. 23, T. 21 N., R. 61 E.; north latitude of 39 degrees, 40 minutes, 16 seconds; west longitude of 115 degrees, 4 minutes, 28 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from winter through early spring, dry from summer through midfall

Soil temperature: 47 to 52 degrees F

Control section:

Clay content—average of 25 to 35 percent

Bk horizon:

Hue—10YR to 5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 or 3

Clay content—22 to 27 percent

Consistence—soft or slightly hard, very friable or friable

Cementation—less than 2 percent fine and medium durinodes

2Bkq horizon:

Hue—10YR to 5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 or 3

Clay content—22 to 27 percent

Consistence—soft or slightly hard, very friable or friable

Cementation—2 to 20 percent fine and medium durinodes

3B' k horizon:

Value—5 or 6

Chroma—2 or 3

Texture—silty clay loam or silty clay

Clay content—27 to 50 percent

Wardbay Series

The Wardbay series consists of deep, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on the side slopes of mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 18 inches, and the mean annual air temperature is about 40 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, frigid Pachic Calcixerolls

Typical pedon: Wardbay very gravelly loam, in map unit 1374; in an area where pebbles cover about 60 percent of the surface and stones cover 5 percent:

A1—0 to 2 inches; gray (10YR 5/1) very gravelly loam, very dark gray (10YR 3/1) moist; moderate fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; common very fine tubular pores; 35 percent pebbles; few thin lime pendants on the underside of rock fragments; strongly effervescent; mildly alkaline (pH 7.8); clear smooth boundary. (1 to 4 inches thick)

A2—2 to 18 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine tubular pores; 30 percent pebbles and 5 percent cobbles; many thin lime pendants on the underside of rock fragments; strongly effervescent; moderately alkaline (pH 8.0); clear wavy boundary. (14 to 20 inches thick)

Bk1—18 to 23 inches; grayish brown (10YR 5/2) extremely cobbly silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine tubular pores; 40 percent pebbles and 25 percent cobbles; thin or moderately thick lime pendants on the underside of rock fragments; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (4 to 10 inches thick)

Bk2—23 to 45 inches; grayish brown (10YR 5/2) extremely cobbly silt loam, very dark grayish brown

(10YR 3/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine tubular pores; 45 percent pebbles and 25 percent cobbles; many soft lime coatings on the underside of rock fragments; violently effervescent; moderately alkaline (pH 8.0); clear irregular boundary. (20 to 30 inches thick)

2R—45 inches; limestone.

Type location: White Pine County, Nevada; about 12 miles south of Ely; about 1,800 feet south and 2,000 feet east of the northwest corner of sec. 15, T. 14 N., R. 63 E.; north latitude of 39 degrees, 4 minutes, 42 seconds; west longitude of 114 degrees, 53 minutes, 5 seconds

Range in Characteristics

Soil moisture: Usually moist; dry from summer through early fall, moist in winter and spring

Soil temperature: 42 to 47 degrees F

Depth to bedrock: 40 to 60 inches

Mollic epipedon: 40 to 60 inches thick

Control section:

Clay content—18 to 27 percent

Texture—very gravelly loam, extremely gravelly silt loam, or extremely cobbly silt loam

Calcium carbonate equivalent—40 to 60 percent in the fraction less than 20 mm in size

A horizon:

Chroma—1 to 3

Carbonates—few thin or moderately thick lime pendants on the underside of pebbles

Bk horizon:

Content of rock fragments—60 to 85 percent (35 to 60 percent pebbles and 25 to 40 percent cobbles and stones, dominantly cobbles)

Carbonates—many thin or moderately thick lime pendants or many thin to thick lime coatings on the underside of rock fragments

Wieland Series

The Wieland series consists of very deep, well drained soils that formed in alluvium derived from mixed rocks and in some loess and volcanic ash. These soils are on the side slopes of fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Durixerollic Haplargids

Typical pedon: Wieland silt loam, in map unit 1012; in an area where pebbles cover about 10 percent of the surface:

A—0 to 8 inches; pinkish gray (7.5YR 6/2) silt loam, dark brown (7.5YR 4/2) moist; weak and moderate thin and medium platy structure; slightly hard, friable, sticky and plastic; common fine roots; common fine tubular and vesicular pores; 10 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (1 to 8 inches thick)

Bt—8 to 17 inches; brown (7.5YR 5/4) gravelly clay, dark brown (7.5YR 4/4) moist; moderate and strong medium subangular blocky structure; hard, firm, sticky and plastic; common fine and medium roots; common fine tubular pores; common fine and medium soft masses and filaments of lime in the lower part of the horizon; 15 percent pebbles; moderately alkaline (pH 8.2); abrupt smooth boundary. (8 to 22 inches thick)

Bqk—17 to 30 inches; pinkish white (7.5YR 8/2) gravelly clay loam, strong brown (7.5YR 5/6) moist; moderate and strong medium and coarse subangular blocky structure; very hard, firm, slightly sticky and slightly plastic; few fine and medium roots; common fine tubular pores; continuous weak lime cementation; many fine, soft masses and filaments of lime; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.5); abrupt smooth boundary. (6 to 19 inches thick)

2Cqk—30 to 45 inches; pink (7.5YR 7/4) gravelly sandy loam, brown (7.5YR 5/4) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and nonplastic; few fine and medium roots; common fine interstitial and tubular pores; common medium nodules of lime; 20 percent discontinuous cementation; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.7); clear wavy boundary. (10 to 16 inches thick)

2Ck—45 to 60 inches; pink (7.5YR 7/4) gravelly sandy loam, light brown (7.5YR 6/4) moist; massive; hard, firm, slightly sticky and slightly plastic; few medium roots; common fine tubular pores; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.2).

Type location: White Pine County, Nevada; about 3.3 miles southeast of Railroad Pass, in Huntington Valley; about 1,200 feet east and 250 feet north of the southeast corner of sec. 33, T. 26 N., R. 55 E.; north latitude of 40 degrees, 5 minutes, 3 seconds; west longitude of 115 degrees, 46 minutes, 40 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is

above 41 degrees F; moist from midfall through spring, dry from summer through early fall

Soil temperature: 47 to 52 degrees F

Depth to continuous weak silica cementation: 17 to 30 inches

Depth to the base of the Bt horizon: 17 to 30 inches

Other features: Gravelly substratum phases with a Cqk horizon, in variegated colors, of very gravelly loamy sand at a depth of 40 inches or more; a 2Cq horizon with 50 to 65 percent pebbles; in some pedons, a thin BA horizon

Control section:

Clay content—40 to 55 percent, after mixing

Content of rock fragments—5 to 35 percent pebbles, after mixing

A horizon:

Value—5 or 6 dry

Chroma—2 or 3

Reaction—mildly alkaline or moderately alkaline

BA horizon (if it occurs) and Bt1 horizon:

Value—5 or 6 dry

Chroma—2 or 3

Structure—weak or moderate very fine to medium subangular blocky or prismatic

Consistence—very friable or friable, sticky or very sticky and plastic or very plastic

Reaction—mildly alkaline or moderately alkaline

Other Bt horizons:

Value—5 to 7 dry, 3 to 5 moist

Chroma—2 to 4 dry, 3 or 4 moist

Clay content—40 to 55 percent, after mixing; in some pedons, subhorizons that have as much as 60 percent clay

Content of rock fragments—when mixed, 5 to 35 percent pebbles

Structure—weak or moderate, fine to coarse prismatic or very fine to medium angular blocky

Reaction—moderately alkaline or strongly alkaline

Other features—in some pedons, slightly effervescent to strongly effervescent and common lime filaments in the lower part

Bqk and Cqk horizons:

Hue—10YR, 7.5YR, or 2.5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—1 to 6

Effervescence—slightly effervescent to violently effervescent

Cementation—in some pedons, a thin discontinuously weakly cemented Bqk subhorizon above the continuously cemented horizon

Relict mottles—occurring at any depth below 30 inches in many pedons

Reaction—moderately alkaline or strongly alkaline

Wintermute Series

The Wintermute series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on fan piedmont remnants, fan skirts, and beach plains. Slopes are 0 to 8 percent. The mean annual precipitation is about 7 inches, and the mean annual air temperature is about 46 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Typic Calciorthids

Typical pedon: Wintermute gravelly sandy loam, in map unit 421; in an area where pebbles cover about 70 percent of the surface:

A1—0 to 2 inches; very pale brown (10YR 7/3) gravelly sandy loam, brown (10YR 5/3) moist; weak thin platy structure parting to weak fine subangular blocky; soft, very friable, slightly sticky and slightly plastic; common fine and medium roots; common very fine and fine vesicular pores; 30 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (1 to 4 inches thick)

A2—2 to 11 inches; pale brown (10YR 6/3) gravelly fine sandy loam, yellowish brown (10YR 5/4) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine to medium roots; common very fine and fine tubular pores; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (6 to 17 inches thick)

Bqk1—11 to 30 inches; light gray (10YR 7/2), continuously weakly lime and silica cemented very gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm, slightly sticky and slightly plastic; common fine and medium roots; few very fine tubular pores; 35 percent pebbles and 5 percent cobbles; few small lenses that are strongly lime cemented; common thick lime coatings on rock fragments; violently effervescent; strongly alkaline (pH 8.6); clear irregular boundary. (10 to 30 inches thick)

Bqk2—30 to 60 inches; pale brown (10YR 6/3) very gravelly loamy sand, yellowish brown (10YR 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; few fine roots; 45 percent pebbles and 5 percent cobbles; few small lenses that are strongly lime cemented; common thick lime coatings on rock fragments; few small pockets of loamy sand without pebbles; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 4,400

feet northeast of the northeast corner of Bassett Lake; about 1,000 feet north and 200 feet west of the southeast corner of sec. 26, T. 19 N., R. 63 E.; north latitude of 39 degrees, 28 minutes, 47 seconds; west longitude of 114 degrees, 50 minutes, 36 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from winter through midspring, dry from late spring through fall

Soil temperature: 47 to 52 degrees F

Depth to the calcic horizon and continuous weak lime cementation: 8 to 20 inches

Control section:

Clay content—8 to 18 percent

Content of rock fragments—35 to 60 percent; in the upper part, average of 15 to 35 percent, dominantly pebbles; in the lower part, average of 45 to 85 percent (35 to 55 percent pebbles and 10 to 30 percent cobbles and stones)

Texture—in the upper part, gravelly loam, gravelly fine sand loam, or gravelly silt loam; in the lower part, very gravelly sandy loam, extremely gravelly loamy sand, or extremely cobbly loamy sand

A horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3 dry, 3 or 4 moist

Bkq horizon:

Value—6 to 8 dry, 5 or 6 moist

Chroma—3 or 4

C horizon (if it occurs):

Value—6 or 7 dry, 5 or 6 moist

Chroma—3 or 4

Texture—gravelly clay loam or gravelly silty clay loam

Clay content—27 to 35 percent

Content of rock fragments—15 to 35 percent, dominantly pebbles

Wredah Series

The Wredah series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on hills and fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 11 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Durargidic Argixerolls

Typical pedon: Wredah gravelly sandy loam, in map unit

1580; in an area where pebbles cover about 30 percent of the surface and cobbles cover 2 percent:

A—0 to 5 inches; dark brown (10YR 4/3) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common fine tubular pores; 15 percent pebbles and 3 percent cobbles; moderately alkaline (pH 8.0); clear smooth boundary. (2 to 8 inches thick)

Bt—5 to 17 inches; dark brown (10YR 4/3) gravelly sandy clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; many very fine and fine roots; few fine tubular pores; few thin clay films on faces of peds; 25 percent pebbles and 3 percent cobbles; moderately alkaline (pH 8.4); gradual wavy boundary. (8 to 20 inches thick)

Bk—17 to 34 inches; very pale brown (10YR 7/3) very gravelly sandy loam, pale brown (10YR 6/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; few fine tubular pores; 50 percent pebbles and 3 percent cobbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (10 to 24 inches thick)

Bqk—34 to 60 inches; very pale brown (10YR 7/3) extremely gravelly sandy loam, pale brown (10YR 6/3) moist; massive; hard, firm and brittle, slightly sticky and slightly plastic; common very fine and fine roots; few very fine tubular pores; 60 percent pebbles and 5 percent cobbles; weak continuous lime and silica cementation; common thin lime coatings on pebbles and cobbles; strongly effervescent; moderately alkaline (pH 8.4)

Type location: White Pine County, Nevada; in Cave Valley; about 25 feet east of Cave Valley Road, 0.5 mile south of Bullwhack Summit; about 2,000 feet east and 2,000 feet south of the projected northwest corner of sec. 7, T. 11 N., R. 64 E.; north latitude of 38 degrees, 49 minutes, 51 seconds; west longitude of 114 degrees, 49 minutes, 42 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Mollic epipedon: 10 to 20 inches thick

Depth to lime and the base of the argillic horizon: 12 to 24 inches

Depth to weak continuous lime and silica cementation: 24 to 36 inches

Control section:

Clay content—25 to 35 percent
 Content of rock fragments—15 to 35 percent,
 dominantly pebbles

A horizon:

Value—4 or 5 dry, 3 or 4 moist
 Chroma—2 or 3 dry

Bt horizon:

Value—4 or 5 dry, 3 or 4 moist
 Chroma—2 or 3
 Structure—subangular or angular blocky

Bk and Bqk horizons:

Value—6 or 7 dry, 5 or 6 moist
 Chroma—2 to 4
 Texture—very gravelly or extremely gravelly sandy
 loam
 Clay content—5 to 15 percent
 Content of rock fragments—35 to 80 percent,
 dominantly pebbles
 Structure—weak or moderate, fine or medium
 subangular blocky or massive
 Reaction—moderately alkaline or strongly alkaline
 Other features—in some pedons, as much as 25
 percent durinodes

Xine Series

The Xine series consists of moderately deep, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on the side slopes of mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 12 inches, and the mean annual air temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Aridic Calcixerolls

Typical pedon: Xine very gravelly loam, in map unit 1178; in an area where pebbles cover about 40 percent of the surface and cobbles cover 5 percent:

A1—0 to 2 inches; grayish brown (10YR 5/2) very gravelly loam, very dark brown (10YR 2/2) moist; moderate very fine and fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 40 percent pebbles; moderately alkaline (pH 8.2); abrupt wavy boundary. (2 to 8 inches thick)

A2—2 to 10 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and plastic; many very fine and fine roots; common very fine and

few fine tubular pores; 45 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (5 to 12 inches thick)

Bk1—10 to 18 inches; pale brown (10YR 6/3) very cobbly loam, dark brown (10YR 4/3) moist; massive; slightly hard, very friable, sticky and plastic; many very fine and fine roots; few medium tubular pores; few fine filaments and concretions of lime; 25 percent pebbles, 20 percent cobbles, and 5 percent stones; moderately alkaline (pH 8.2); clear wavy boundary. (4 to 12 inches thick)

Bk2—18 to 35 inches; pale brown (10YR 6/3) very cobbly loam, dark brown (10YR 4/3) moist; massive; slightly hard, very friable, sticky and plastic; common very fine and fine roots; many very fine tubular pores; common fine lime filaments and concretions; 25 percent pebbles and 20 percent cobbles; moderately alkaline (pH 8.2); abrupt wavy boundary. (5 to 21 inches thick)

Cr—35 inches; soft, weathered, fractured limestone.

Type location: White Pine County, Nevada; about 6 miles west of Uhalde Well, in the Butte Mountains; in an unsectionalized area about 0.6 mile west and 3.6 miles north of the northeast corner of sec. 6, T. 20 N., R. 60 E.; north latitude of 39 degrees, 41 minutes, 32 seconds; west longitude of 115 degrees, 15 minutes, 46 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from late fall through early summer, dry from midsummer through midfall

Soil temperature: 44 to 46 degrees F

Mollic epipedon: 7 to 14 inches thick

Depth to the calcic horizon: 7 to 20 inches

Depth to paralithic contact: 20 to 40 inches

Other features: The amount of secondary lime increasing with increasing depth

Control section:

Texture—very cobbly loam or very cobbly sandy loam
 Clay content—10 to 18 percent
 Content of rock fragments—35 to 60 percent, mainly cobbles

A horizon:

Value—4 or 5 dry, 2 or 3 moist; in some pedons, a thin A1 horizon that has dry value of 6
 Chroma—2 or 3
 Reaction—mildly alkaline or moderately alkaline

Bk horizon:

Value—5 to 7 dry, 3 to 5 moist
 Chroma—3 or 4
 Reaction—moderately alkaline or strongly alkaline

Structure—subangular blocky or massive
 Consistence—soft or slightly hard
 Calcium carbonate equivalent—25 to 40 percent in
 the fraction less than 20 mm in size

Yody Series

The Yody series consists of well drained soils that are moderately deep over a duripan. These soils formed in alluvium derived from andesite. They are on fan piedmont remnants. Slopes are 0 to 15 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Haploxerollic Durargids

Typical pedon: Yody gravelly sandy loam, in map unit 192:

- A—0 to 4 inches; pale brown (10YR 6/3) gravelly sandy loam, brown (10YR 4/3) moist; weak thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few fine roots in the lower 2 inches; many very fine and fine vesicular pores; 15 percent pebbles; moderately alkaline (pH 8.2); abrupt smooth boundary. (2 to 4 inches thick)
- Bt1—4 to 6 inches; pale brown (10YR 6/3) gravelly sandy clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine to medium roots; common very fine and fine tubular pores; 15 percent pebbles; moderately alkaline (pH 8.2); abrupt smooth boundary. (0 to 2 inches thick)
- Bt2—6 to 14 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; common very fine to medium roots; common very fine and fine tubular pores; 15 percent pebbles; patchy clay films; moderately alkaline (pH 8.2); clear smooth boundary. (3 to 8 inches thick)
- Bt3—14 to 24 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; few very fine to medium roots; common very fine and fine tubular pores; 30 percent pebbles; patchy clay films; moderately alkaline (pH 8.2); gradual smooth boundary. (3 to 10 inches thick)
- Btk—24 to 30 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine to medium roots; common very fine and

fine tubular pores; 30 percent pebbles; patchy clay films; few lime films; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (3 to 8 inches thick)

Bqk—30 to 36 inches; white (10YR 8/2) gravelly sandy loam, light gray (10YR 7/2) moist; massive; hard, firm, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; 30 percent pebbles; weak silica cementation; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary. (6 to 28 inches thick)

Bqkm—36 to 60 inches; very pale brown (10YR 7/4), strongly cemented duripan, yellowish brown (10YR 5/4) moist; massive; very hard, very firm; few very fine roots between plates; few very fine tubular pores; common thin silica pendants on the underside of rock fragments; 40 percent pebbles; violently effervescent; strongly alkaline (pH 8.8).

Type location: White Pine County, Nevada; about 2 miles southwest of Preston; about 1,300 feet east and 1,350 feet south of the northwest corner of sec. 26, T. 12 N., R. 61 E.; north latitude of 38 degrees, 52 minutes, 33 seconds; west longitude of 115 degrees, 5 minutes, 12 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 52 degrees F

Thickness of the A and Bt horizons: 14 to 30 inches

Depth to the calcic horizon: 14 to 30 inches

Depth to the strongly cemented duripan: 30 to 40 inches

Control section:

Clay content—18 to 27 percent, when mixed

Texture—sandy clay loam, gravelly sandy clay loam, or clay loam in the upper part and loam, sandy loam, or loamy sand in the lower part

Content of rock fragments—15 to 35 percent, when mixed

A horizon:

Value—6 or 7 dry

Chroma—2 or 3

Other features—commonly has a polygonal surface with vesicular pores

Bt horizon:

Hue—10YR or 7.5YR

Value—3 or 4 moist

Chroma—3 or 4

Consistence—slightly hard or hard, friable or firm

Other features—contains more than 35 percent sand

Bqk horizon:

Value—6 to 8 dry, 5 to 7 moist

Chroma—2 to 4

Texture—loam, sandy loam, or loamy sand

Consistence—slightly hard or hard, friable or firm

Content of rock fragments—15 to 35 percent

Reaction—moderately alkaline or strongly alkaline

Zerk Series

The Zerk series consists of very deep, well drained soils that formed in alluvium derived from mixed rocks. These soils are on alluvial flats and beach plains. Slopes are 0 to 8 percent. The mean annual precipitation is about 7 inches, and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Duric Calciorthids

Typical pedon: Zerk gravelly loam, in map unit 160:

A1—0 to 3 inches; light brownish gray (10YR 6/2) gravelly loam, grayish brown (10YR 5/2) moist; weak thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine vesicular pores; 20 percent pebbles; calcium carbonate equivalent of 10 percent; slightly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (2 to 5 inches thick)

A2—3 to 7 inches; light yellowish brown (10YR 6/4) gravelly loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine interstitial and few very fine tubular pores; 15 percent pebbles; calcium carbonate equivalent of 12 percent; strongly effervescent; strongly alkaline (pH 8.6); clear wavy boundary. (3 to 8 inches thick)

Bk—7 to 12 inches; light yellowish brown (10YR 6/4) very gravelly loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine interstitial and few very fine tubular pores; 40 percent pebbles and 3 percent cobbles; calcium carbonate equivalent of 15 percent; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary. (3 to 8 inches thick)

2Bqk1—12 to 20 inches; pale brown (10YR 6/3) extremely gravelly loamy sand, brown (10YR 5/3) moist;

massive; hard, friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine interstitial pores; 60 percent pebbles and 15 percent cobbles; common weakly to strongly cemented stringers and masses as much as 7 inches wide; thick silica and lime pendants on the underside of rock fragments; calcium carbonate equivalent of 22 percent; violently effervescent; strongly alkaline (pH 8.6); gradual wavy boundary. (5 to 15 inches thick)

2Bqk2—20 to 60 inches; pale brown (10YR 6/3) extremely gravelly coarse sand, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; common fine and medium interstitial pores; 60 percent pebbles and 20 percent cobbles; few small weakly silica cemented vertical stringers; thin to thick lime and silica pendants on the underside of rock fragments; calcium carbonate equivalent of 16 percent; violently effervescent; strongly alkaline (pH 8.6).

Type location: White Pine County, Nevada; about 4.5 miles north of McGill; about 1,500 feet north and 500 feet west of the southeast corner of sec. 28, T. 19 N., R. 64 E.; north latitude of 39 degrees, 28 minutes, 55 seconds; west longitude of 114 degrees, 46 minutes, 13 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall

Soil temperature: 47 to 51 degrees F

Calcium carbonate equivalent: 15 to 35 percent

Control section:

Content of rock fragments—average of 60 to 80 percent; some thin layers having less than 60 percent

Texture of the fine-earth fraction—stratified but averages loamy sand to coarse sand; commonly loam with more than 50 percent fine sand or coarser sand in the upper part

A horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Bk horizon:

Value—5 to 7 dry, 4 or 5 moist

Chroma—4 or 5

Texture—gravelly or very gravelly loam

2Bqk1 horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—3 or 4

Cementation—20 to 70 percent discontinuously weakly to strongly lime and silica cemented strata

2Bqk2 horizon:

Value—5 to 7 dry, 4 or 5 moist

Chroma—3 or 4

Zimbob Series

The Zimbob series consists of very shallow or shallow, well drained soils that formed in residuum and colluvium derived from limestone and dolomite. These soils are on the side slopes of hills and mountains. Slopes are 4 to 75 percent. The mean annual precipitation is about 12 inches, and the mean annual air temperature is about 45 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic Lithic Xeric Torriorthents

Typical pedon: Zimbob extremely gravelly loam, in map unit 113; in an area where pebbles cover about 75 percent of the surface and cobbles cover 15 percent:

A—0 to 1 inch; light brownish gray (10YR 6/2) extremely gravelly loam, brown (10YR 5/3) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common fine vesicular pores; 50 percent pebbles, 15 percent cobbles, and 1 percent stones; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (1 to 2 inches thick)

Bw—1 to 5 inches; pale brown (10YR 6/3) gravelly loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine tubular pores; 30 percent pebbles and 1 percent stones; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (0 to 4 inches thick)

Bk—5 to 12 inches; pale brown (10YR 6/3) very gravelly loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine tubular pores; common very thin lime coatings on the underside of rock fragments; 40 percent pebbles and 5 percent cobbles; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary. (3 to 8 inches thick)

R—12 inches; fractured limestone with thin or moderately thick lime pendants along fractures.

Type location: White Pine County, Nevada; about 3 miles

south of Pancake Summit; about 2,300 feet south and 1,600 feet west of the northeast corner of sec. 6, T. 17 N., R. 56 E.; north latitude of 39 degrees, 21 minutes, 10 seconds; west longitude of 115 degrees, 54 minutes, 28 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist in winter and spring, dry in summer and fall, except for 0 to 8 cumulative days between July and October because of convection storms

Soil temperature: 47 to 52 degrees F

Depth to bedrock: 4 to 14 inches

Reaction: Moderately alkaline or strongly alkaline throughout the profile

Control section:

Clay content—10 to 18 percent

Texture—average of very gravelly loam or very gravelly sandy loam

Content of rock fragments—average of 35 to 50 percent, mainly pebbles

Calcium carbonate equivalent—50 to 70 percent in the fraction less than 20 mm in size

A horizon:

Value—6 or 7 dry, 3 to 5 moist

Chroma—2 to 4 dry or moist

Bw horizon (if it occurs):

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4

Bk horizon:

Value—5 to 7 dry, 4 or 5 moist

Chroma—2 to 4

Secondary carbonates: Few or common very thin coatings on the underside of rock fragments

Other features—above the bedrock in some pedons, a subhorizon, as much as 2 inches thick, with few thin, patchy lime and silica coatings on the underside of rock fragments

Zimwala Series

The Zimwala series consists of very deep, moderately well drained soils that formed in mixed alluvium over lacustrine sediments. These soils are on lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 10 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Fine-silty, carbonatic, mesic Typic Torriorthents

Typical pedon: Zimwala silt loam, in map unit 730:

A—0 to 5 inches; light gray (2.5Y 7/2) silt loam, grayish brown (2.5Y 5/2) moist; strong medium platy structure; slightly hard, friable, sticky and slightly plastic; common very fine roots; common very fine tubular pores; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (3 to 8 inches thick)

Cz—5 to 13 inches; light gray (2.5Y 7/2) silt loam, grayish brown (2.5Y 5/2) moist; strong medium platy structure; slightly hard, friable, sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and fine tubular and few medium tubular pores; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (5 to 11 inches thick)

Cnz1—13 to 29 inches; light gray (2.5Y 7/2) silt loam, light olive brown (2.5Y 5/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (12 to 20 inches thick)

Cnz2—29 to 40 inches; light gray (2.5Y 7/2) silty clay loam, pale yellow (2.5Y 7/4) moist; moderate fine and medium subangular blocky structure; soft, very friable, sticky and plastic; few very fine roots; few very fine tubular pores; violently effervescent; very strongly alkaline (pH 9.2); clear smooth boundary. (8 to 15 inches thick)

2Cy—40 to 60 inches; light gray (5Y 7/2) silty clay, pale olive (5Y 6/3) moist; strong medium and fine subangular blocky, almost spherical; 5 percent gypsum coatings on spheres; hard, friable, sticky and plastic; few very fine roots; few very fine tubular pores; medium faint pale yellow mottles; violently effervescent; very strongly alkaline (pH 9.4).

Type location: White Pine County, Nevada; in Long Valley; about 3,000 feet north and 1,800 feet east of the southwest corner of sec. 23, T. 22 N., R. 58 E.; north latitude of 39 degrees, 45 minutes, 48 seconds; west longitude of 115 degrees, 24 minutes, 35 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist for short periods from late fall through midspring, dry from late spring through midfall

Soil temperature: 47 to 52 degrees F

Depth to lacustrine sediments: 35 to 50 inches

Reaction: Strongly alkaline or very strongly alkaline

Control section:

Clay content—27 to 35 percent

Texture—stratified silt loam or silty clay loam

Calcium carbonate equivalent in the fraction less than 20 mm in size—25 to 55 percent in individual horizons; average of more than 40 percent

A horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 to 4

Cz horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 to 4

Salinity—electrical conductivity of more than 8 millimhos per cubic centimeter

Cnz horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 to 4

Consistence—soft or slightly hard, very friable or friable

Salinity—electrical conductivity of more than 16 millimhos per cubic centimeter

Sodium adsorption ratio (SAR)—more than 40

2Cy horizon:

Value—6 or 7 dry or moist

Chroma—2 to 4

Salinity—electrical conductivity of more than 16 millimhos per cubic centimeter

Sodium adsorption ratio (SAR)—more than 30

Zorravista Series

The Zorravista series consists of very deep, excessively drained soils that formed in mixed eolian material. These soils are on sand dunes. Slopes are 2 to 8 percent. The mean annual precipitation is about 9 inches, and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Mixed, mesic Xeric Torripsamments

Typical pedon: Zorravista fine sand, in map unit 253:

A—0 to 5 inches; light brownish gray (10YR 6/2) fine sand, dark yellowish brown (10YR 4/4) moist; single grained; loose, nonsticky and nonplastic; many very fine roots; slightly effervescent; strongly alkaline (pH 8.5); clear smooth boundary. (3 to 8 inches thick)

C1—5 to 22 inches; light brownish gray (10YR 6/2) fine sand, dark yellowish brown (10YR 4/4) moist; massive; single grained; loose, nonsticky and

nonplastic; few very fine roots; slightly effervescent; strongly alkaline (pH 8.5); gradual smooth boundary. (17 to 36 inches thick)

C2—22 to 44 inches; light gray (10YR 7/2) fine sand, yellowish brown (10YR 5/4) moist; single grained; loose, nonsticky and nonplastic; few very fine roots; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary. (22 to 31 inches thick)

C3—44 to 54 inches; white (2.5Y 8/2) silty clay loam, light brownish gray (2.5Y 6/2) moist; common fine reddish yellow (7.5YR 7/6) manganese stains; massive; slightly hard, very friable, slightly sticky and slightly plastic; violently effervescent; very strongly alkaline (pH 9.4); gradual smooth boundary. (0 to 12 inches thick)

2C4—54 to 60 inches; light gray (2.5Y 7/2) silty clay loam, light yellowish brown (2.5Y 6/4) moist; many fine reddish yellow (7.5YR 6/8) manganese stains; massive; slightly hard, very friable, slightly sticky and slightly plastic; violently effervescent; very strongly alkaline (pH 9.4).

Type location: White Pine County, Nevada; about 0.5 mile northwest of the northern tip of the Pancake Range, in Newark Valley; about 1,000 feet east and 2,000 feet south of the northeast corner of sec. 36, T. 19 N., R. 55 E.; north latitude of 39 degrees, 28 minutes, 27 seconds; west longitude of 115 degrees, 43 minutes, 19 seconds

Range in Characteristics

Soil moisture: Usually dry when the soil temperature is above 41 degrees F; moist from winter through early spring, dry from midspring through fall

Soil temperature: 47 to 52 degrees F

Other features: Effervescent to a depth of at least 20 inches

Control section:

Clay content—less than 5 percent

A horizon:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 3 or 4 moist

Chroma—2 to 4

Reaction—moderately alkaline or strongly alkaline

Effervescence—slightly effervescent or strongly effervescent

C horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 3 to 6 moist

Chroma—2 to 4

Clay content—less than 5 percent in the upper part

Reaction—slightly alkaline to strongly alkaline

Effervescence—noneffervescent to strongly effervescent

Other features—in some pedons, lacustrine sediments below a depth of 44 inches

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Glossary

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted. The degrees of alkalinity, expressed as the exchangeable sodium percentage, are:

Nonalkali	less than 15
Slightly alkali	15 to 25
Moderately alkali	25 to 50
Strongly alkali	more than 50

Alluvial fan. A semiconical, or fan-shaped, constructional major landform that is mainly stratified alluvium with debris flow deposits in some areas. It is the major margin of a piedmont slope, and its apex is a source of alluvium debouching from a mountain valley into an intermontane basin. Also, a generic term for similar landforms in various other landscape positions.

Alluvial fan remnant. The remainder of an alluvial fan that has been dissected or partially buried.

Alluvial flat. The nearly level alluvial surface between a piedmont slope and the playa of a bolson or the axial-stream flood plain of a semibolson. This landform can include both recent and relict components.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Andesite. A volcanic rock composed essentially of andesine and one or more mafic constituents.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Ash. Fine pyroclastic material less than 4.0 millimeters in diameter; in "Soil Taxonomy," ash is less than 2.0 millimeters.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic

repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity).

The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil.

Back slope. The geomorphic component that forms the steepest inclined surface and principal element of many hillsides. Back slopes in profile are commonly steep, are linear, and may or may not include cliff segments.

Badland. Steep or very steep, commonly nonstony, barren land dissected by many intermittent drainage channels. Badland is most common in semiarid and arid regions where streams are entrenched in soft geologic material. Local relief generally ranges from 25 to 500 feet. Runoff potential is very high, and geologic erosion is active.

Ballena. A major landform comprising distinctively round-topped ridge line remnants of fan alluvium. The broadly rounded shoulders of the ridge meet from either side to form a narrow crest and merge smoothly with the concave back slopes. In ideal examples, the slightly concave foot slopes of adjacent ballenas merge to form a smoothly rounded drainageway.

Bar (offshore and barrier). A component landform that consists of elongated, commonly curving, low ridges of well sorted sand and gravel and stands above the general level of a bolson floor. It is the result of the wave action of a Pleistocene lake.

Basal area. The area of a cross section of a tree. It is a measure of stand density, commonly expressed in square feet. For pinyon and juniper stands, it is the section at a height of 1 foot and is measured outside the bark.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

- Basin.** A general term for an intermontane basin, a bolson, a semibolson, an area of centripetal drainage, or a structural depression.
- Basin floor.** The lowermost, nearly level major physiographic part of a bolson or semibolson. It includes all alluvial, eolian, and erosional landforms that are below the piedmont slopes.
- Beach plain.** A major landform of bolson floors comprised of numerous, closely spaced offshore bars and intervening lagoons. It is the result of a receding Pleistocene lake.
- Beach terrace.** A component landform occurring on the lower piedmont slope that consists of a wave-cut scarp and a wave-built terrace of well sorted sand and gravel, marking a stillstand of a Pleistocene lake.
- Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
- Bolson.** An internally drained intermontane basin.
- Bolson floor.** The specific identification of a floor of a bolson, as compared with the floor of a semibolson; both are basin floors.
- Boulders.** Rock fragments larger than 2 feet (60 centimeters) in diameter.
- Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.
- Calcareous soil.** A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.
- Canopy.** The leafy crown of trees or shrubs. (See Crown.)
- Channel.** The bed of a single or braided waterway that commonly is barren of vegetation. Channels form in young alluvium. They may be enclosed by banks, or they may be splayed across a fan surface and slightly rounded above it. They may include bars and dumps consisting of cobbles and stones. Except for flood plain playas, channels are landform elements.
- Chemical treatment.** Control of unwanted vegetation through the use of chemicals.
- Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
- Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
- Clay skin.** See Clay film.
- Coarse textured soil.** Sand or loamy sand.
- Cobble (or cobblestone).** A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.
- Cobbly soil material.** Material that is 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material is 35 to 60 percent of these rock fragments, and extremely cobbly soil material is more than 60 percent.
- Colluvium.** Soil material, rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.
- Complex, soil.** A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.
- Component landform.** A feature of the earth's surface that is part of a major landform and was created by partial dissection of the major landform or by alluvial or eolian accretion. A component landform is the smallest type of landform that can be described as a single unit. Its morphological parts are called landform elements. A side slope element can be subdivided into slope components.
- Conglomerate.** A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.
- Conservation cropping system.** Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.
- Consistence, soil.** The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are:
Loose.—Noncoherent when dry or moist; does not hold together in a mass.
Friable.—When moist, crushes easily under gentle

pressure between thumb and forefinger and can be pressed together into a lump.

Firm.—When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.

Plastic.—Readily deformed by moderate pressure but can be pressed into a lump; will form a “wire” when rolled between thumb and forefinger.

Sticky.—Adheres to other material and tends to stretch somewhat and pull apart rather than to pull free from other material.

Hard.—When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.

Soft.—When dry, breaks into powder or individual grains under very slight pressure.

Cemented.—Hard; little affected by moistening.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coppice dune. A small dune of fine grained soil material stabilized around shrubs or small trees.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crest. The slope component comprising a very narrow, commonly linear top of an erosional ridge, hill, mountain, or other landform.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI).

The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Depth classes (soil). Classes of soils based on the depth to bedrock or to a restrictive feature, such as a hardpan. The soil depth classes are:

Very shallow	less than 10 inches deep
Shallow	10 to 20 inches deep
Moderately deep	20 to 40 inches deep
Deep	40 to 60 inches deep
Very deep	more than 60 inches deep

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

Desert pavement. On a desert surface, a layer of gravel or larger fragments that was emplaced by upward movement of the underlying sediment or that remains after finer particles have been removed by running water or the wind.

Desert varnish. A glossy sheen or coating on stones and gravel in arid regions.

Dolomite. A mineral, $\text{CaMg}(\text{CO}_3)_2$, commonly with iron replacing magnesium (ankerite). Hexagonal rhombohedral. A common rock-forming mineral.

Drainage class (natural). Refers to the frequency and duration of periods of saturation or partial saturation during soil formation, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven classes of natural soil drainage are recognized:
Excessively drained.—These soils have very high and high hydraulic conductivity and a low water-holding capacity. They are not suited to crop production unless irrigated.

Somewhat excessively drained.—These soils have high hydraulic conductivity and a low water-holding capacity. Without irrigation, only a narrow range of crops can be grown and yields are low.

Well drained.—These soils have an intermediate water-holding capacity. They retain optimum amounts of moisture, but they are not wet close enough to the surface or long enough during the growing season for yields to be reduced.

Moderately well drained.—These soils are wet close enough to the surface or long enough that planting or harvesting operations or yields of some field crops are adversely affected unless a drainage system is installed. Moderately well drained soils commonly have a layer with low hydraulic conductivity, a wet layer relatively high in the profile, additions of water by seepage, or some combination of these.

Somewhat poorly drained.—These soils are wet close enough to the surface or long enough that planting or harvesting operations or crop growth is markedly

restricted unless a drainage system is installed. Somewhat poorly drained soils commonly have a layer with low hydraulic conductivity, a wet layer high in the profile, additions of water through seepage, or a combination of these.

Poorly drained.—These soils commonly are so wet at or near the surface during a considerable part of the year that field crops cannot be grown under natural conditions. Poorly drained conditions are caused by a saturated zone, a layer with low hydraulic conductivity, seepage, or a combination of these.

Very poorly drained.—These soils are wet to the surface most of the time. The wetness prevents the growth of important crops (except for rice) unless a drainage system is installed.

Drainage, surface. Runoff, or surface flow of water, from an area.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Effervescence. The quality of a soil measured when drops of diluted (1:10) hydrochloric acid (HCl) are added to the soil. The ratings are as follows:

Very slightly effervescent	few bubbles
Slightly effervescent	bubbles readily
Strongly effervescent	bubbles form low foam
Violently effervescent	bubbles form thick foam quickly

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or

animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Excess salt (in tables). Excess water-soluble salts in the soil that restrict the growth of most plants.

Excess sodium (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

Fan apron. A component landform consisting of a sheetlike mantle of relatively young alluvium that partially covers the surface of an older fan piedmont or, in some areas, an alluvial fan. A fan apron buries a pedogenic soil.

Fan collar. A thin, short mantle of alluvium along the uppermost margin of a major alluvial fan at a mountain front.

Fan piedmont. The most extensive major landform of most piedmont slopes. It is formed by the lateral coalescence of mountain-front alluvial fans into one generally smooth slope and by accretion of fan aprons. Fan piedmonts commonly are complexes of many component landforms.

Fan piedmont remnant. The remainder of a fan piedmont that has been dissected or partially buried.

Fan remnant. A generic term for a component landform that is the remainder of various older fans that have been dissected (erosional fan remnants) or partially buried (nonburied fan remnants). Erosional fan remnants have a flattish summit that consists of a relict fan surface; nonburied fan remnants consist entirely of a relict fan surface.

Fan remnant side slope. A landform element comprised of the relatively young erosional slope around the sides of an erosional fan remnant. It is composed of shoulders, back slopes, and foot slopes.

Fan skirt. A major landform comprised of laterally coalescing, small alluvial fans that originate from gullies that are cut into or extend from the inset fan of a fan piedmont and merge along their toe slopes with the basin floor. Fan skirts are smooth or only slightly dissected.

Fast intake (in tables). The rapid movement of water into the soil.

Fault block. A mass bounded on at least two opposite sides by faults; it may be elevated or depressed relative to an adjoining region, or it may be elevated relative to the region on one side and depressed relative to the region on the other.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Fine textured soil. Sandy clay, silty clay, or clay.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluve. A linear depression, rill, gully, arroyo, canyon, or valley of any size. A drainageway flows along the fluve at some time.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Foot slope. The relatively gently sloping, slightly concave slope component of an erosional slope that is at the base of the back slope component. Synonym: pediment.

Forb. Any herbaceous plant not a grass or a sedge.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors and mottles.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that is 15 to 50 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is

cemented by iron oxide, silica, calcium carbonate, or other substance.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above the surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Hydrologic soil groups. Refers to soils grouped

according to their runoff-producing characteristics. The chief consideration is the inherent capacity of soil bare of vegetation to permit infiltration. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff. The four hydrologic groups are:

Group A.—Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B.—Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep and deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C.—Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D.—Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Inset fan. The flood plain of a commonly ephemeral stream that is confined between fan remnants, basin floor remnants, ballenas, or closely opposed fan toe slopes. Its transversely level cross section is evidence of the alluviation of a fluvial. The fan is wide enough that raw channels cover only a fraction of its surface.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Irrigation. Application of water to soils to assist in the production of crops.

Lacustrine deposit (geology). Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lagoon. The ponding area behind a Pleistocene offshore or barrier bar.

Lake plain. A major landform of some bolson floors that is nearly level and consists of fine textured, stratified bottom sediment of a Pleistocene lake.

Lake-plain terrace. A somewhat elevated area and component landform of a lake plain.

Landform element. The morphological part of a component landform. Side slope landform elements may be divided into slope components.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Limestone. A bedded sedimentary deposit consisting chiefly of calcium carbonate (CaCO_3) that yields lime when burned. Limestone is the most important and widely distributed of the carbonate rocks and is the consolidated equivalent of limy mud, calcareous sand, or shell fragments.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by the wind.

Low strength. The soil is not strong enough to support loads.

Major landform. A subdivision of the piedmont slope or basin floor major physiographic part that reflects a major morphogenetic process taking place over a long period or that is the result of a special erosional or depositional process. Many major landforms are dissected, and their original area is occupied by component landforms.

Major physiographic part. The very large part of an intermontane basin that is characterized by dominant slope and position and is comprised of major landforms (i.e., steeply sloping mountains that stand above less sloping piedmonts that in turn grade to nearly level basin floors).

Mean annual increment. The average yearly increase per acre in the volume of a stand, computed by dividing the total volume of the stand by its age.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Miocene. The fourth of five epochs into which the Tertiary period is divided. Also, the series of strata deposited during that time.

Miogeosyncline. An orthogeosyncline (a long, narrow geosyncline) in which volcanic rocks are rare or do not occur.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Monzonite. A granular plutonic rock containing approximately equal amounts of orthoclase and plagioclase and thus intermediate between syenite and diorite.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Mottling generally indicates poor aeration and impeded drainage. Descriptive terms are as follows: abundance—*few*, *common*, and *many*; size—*fine*, *medium*, and *coarse*; and contrast—*faint*, *distinct*, and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above the surrounding lowlands, commonly of restricted summit area (relative to a plateau), and generally having steep sides and a surface of considerably bare rock. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Mountain valley fan. A major landform that is the result of alluvial filling of a mountain valley or intermontane basin by coalescent valley side slope fans, the toe slopes of which meet from either side of the valley along an axial drainageway. It is an extension of the upper piedmont slope into mountain valleys. Most mountain valley fans have been dissected.

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value between 6.6 and 7.3. (See Reaction, soil.)

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Observed rooting depth. The depth to which roots have been observed to penetrate.

Offshore bar. An accumulation of sand in the form of a ridge, built at some distance from the shore and under water. It results chiefly from wave action.

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Paleozoic. One of the eras of geologic time that, between the Late Precambrian and Mesozoic Eras, comprises the Cambrian, Ordovician, Silurian, Devonian, Mississippian, Pennsylvanian, and Permian Systems.

Parna dune. An eolian dune built of sand-sized aggregates of clayey material that commonly occurs leeward of a playa.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan* and *claypan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Partial ballena. A spur that has a fully rounded crest and is connected to an erosional fan remnant large enough that some relict fan surface is preserved on the remnant summit.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pediment. The foot slope component of an erosional slope.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The downward movement of water through the soil.

Percolates slowly (in tables). The slow movement of water through the soil, adversely affecting the specified use.

Permeability. The quality of the soil that enables water to move downward through the profile. Permeability is measured as the number of inches per hour that

water moves downward through the saturated soil. Terms describing permeability are:

Very slow	less than 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and thickness.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plain. A flat, undulating, or rolling area, large or small, that includes few prominent hills or valleys. It generally is at a low elevation in relation to surrounding areas, and it may have considerable overall slope and local relief.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Playa. An ephemeral flooded, barren area on a basin floor that is veneered with fine textured sediment and acts as a temporary or final sink for drainage water.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community (climax plant community). The plant community on a given site that will be established if present environmental conditions continue to prevail and the site is properly managed.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Precambrian. Refers to all rocks formed before Cambrian time.

Prescribed burning. Burning an area under conditions of weather and soil moisture and at the time of day that will result in the intensity of heat and spread required to accomplish specific forest management, wildlife, grazing, or fire hazard reduction purposes.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Quartzite. A granulose metamorphic rock consisting chiefly of quartz.

Quaternary. The second period of the Cenozoic Era of geologic time, extending from the end of the Tertiary Period (about 2 million years ago) to the present and comprising two epochs, the Pleistocene (Ice Age) and the Holocene (Recent). Also, the corresponding time-stratigraphic system of earth materials.

Range condition. The present composition of the plant community on a range site in relation to the potential natural plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Range site. An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other range sites in kind or proportion of species or total production.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Extremely acid	below 4.5
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Medium acid	5.6 to 6.0
Slightly acid	6.1 to 6.5

Neutral	6.6 to 7.3
Mildly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Relict. Old, or remaining from previous times; in the present context, of Pleistocene age.

Relief. The elevations or inequalities of a land surface, considered collectively.

Remnant. The remainder of a larger landform or of a land surface that has been dissected or partly buried.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rhyolite. The aphanitic equivalent of granite.

Riparian areas. Geographically delineable areas with distinctive resource values and characteristics that are comprised of the aquatic and riparian types identified by soil characteristics or distinctive plant communities that require free, or unbound, water.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Rubble land. Land consisting of stones or boulders, commonly at the base of mountains; in places it consists of cobbles, stones, and boulders left on mountainsides by glaciation or periglacial processes.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs the growth of plants. A saline soil does not contain excess exchangeable sodium.

Salty water (in tables). Water that is too salty for consumption by livestock.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sand dune. A component landform made up of eolian, sand-sized mineral particles. Dunes commonly are on the leeward side of a Pleistocene lakebed.

Sand sheet. A major landform comprising an extensive, several-foot-thick layer of eolian sand from pluvial lake beaches, sometimes partly redeposited by water. It is spread across alluvial flats, onto piedmont slopes, or even over low mountains and has an undulating and commonly duned surface.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material

Sediment. Solid clastic material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by wind, water, ice, or mass wasting and has come to rest on the earth's surface either above or below sea level. Sedimentary deposits in a broad sense also include materials precipitated from solution or emplaced by explosive volcanism, as well as organic remains (such as peat) that have not been subject to appreciable transport.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Semibolson. An externally drained intermontane basin.

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer or of the underlying material. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Shoulder. The convex slope component at the top of an erosional side slope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope. The erosional slope around the sides of an erosional fan remnant, hill, ballena, mountain, or other landform. It is composed of shoulders, back slopes, foot slopes, and toe slopes. Also, the planimetrically linear parts of the slopes around a digitately dissected

fan remnant, hill, or other landform, as compared with the planimetrically convex nose slope and concave side slope parts.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Site index. A designation of the quality of a forest site. Site index for trees other than pinyon and juniper is based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75. For pinyon and juniper stands, the site index is based on tree diameter at a height of 1 foot and the spacing between trees.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey the following slope classes are recognized:

Nearly level	0 to 2 percent
Gently sloping	2 to 4 percent
Moderately sloping	4 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 30 percent
Steep	30 to 50 percent
Very steep	50 to 75 percent
Extremely steep	more than 75 percent

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slope component. A morphological element of an erosional slope and a morphological subdivision of the side slope landform element.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium absorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to $\text{Ca}^{++} + \text{Mg}^{++}$. The degrees of sodicity are:

Nonsodic	less than 13
Slightly sodic	13 to 23
Moderately sodic	23 to 68
Strongly sodic	more than 68

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the underlying material. The living roots and plant and animal activities are largely confined to the solum.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 6 to 15 inches (15 to 38 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stony soil material. Material, commonly in a subsurface layer, that contains a specified amount of rock fragments that are mainly 10 to 24 inches in diameter. The amount of these fragments, by volume, is expressed as:

Stony	15 to 35 percent
Very stony	35 to 60 percent
Extremely stony	more than 60 percent

Stony surface material. The amount of rock fragments

10 to 24 inches in diameter covering the surface is expressed as:

Stony	0.01 to 3 percent
Very stony	3 to 15 percent
Extremely stony	more than 15 percent

Strata. Sections of a formation that consist of approximately the same kind of rock material throughout.

Stream terrace. A transversely level erosional remnant of a former axial stream or major desert stream flood plain that slopes in the same direction as the adjacent, incised stream and is underlain by well sorted, stratified sand and gravel or by loamy or clayey sediment.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Summit. The flattish top of an erosional fan remnant, hill, mountain, or other landform. The term is used for both a landform element and a slope component.

Tailwater. In hydraulics, the water directly downstream from a dam or similar structure.

Talus. Rock fragments of any size or shape, commonly coarse and angular, derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose, broken rock formed chiefly by falling, rolling, or sliding.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior.

Tectonism. The structural behavior of an element of the earth's crust during or between major cycles of sedimentation.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Tertiary. The first period of the Cenozoic Era of geologic time, following the Mesozoic Era, preceding the Quaternary (approximately 65 to 2 million years age). Also, the corresponding time-stratigraphic subdivision (system) of earth materials. Epoch or series subdivisions are, in order of increasing age, Pliocene, Miocene, Oligocene, Eocene, and Paleocene.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand*, *loamy sand*, *sandy loam*, *loam*, *silt loam*, *silt*, *sandy clay loam*, *clay loam*, *silty clay loam*, *sandy clay*, *silty clay*, and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). A layer of otherwise suitable soil material that is too thin for the specified use.

Toe slope. The lowest part of a foot slope component of an erosional slope. It is distinguished from the upper part of a foot slope by a greater accumulation of pediment. Also, the lowest and most gently sloping part of a slope.

Too arid (in tables). The soil is dry most of the time, and vegetation is difficult to establish.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Triassic. The earliest of the geologic periods in the Mesozoic Era. Also, the system of strata deposited during the period.

Tuff. A compacted deposit that is 50 percent or more volcanic ash and dust.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Volcanic. Pertaining to the deep-seated (igneous) processes by which magma and associated gases rise through the crust and are extruded onto the earth's surface and into the atmosphere. The term also refers to the structures, rocks, and landforms resulting from these processes.

Water-supplying capacity. The total amount of water available in the soil for plant growth in a normal year from precipitation, from run-on, and from a capillary fringe minus runoff.

Water table. The upper level of ground water or that level below which the soil is saturated.

Weathering. All physical and chemical changes produced

in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Windthrow. The uprooting and tipping over of trees by the wind.

Woodland (grazable). Forest land that produces, at least periodically, vegetation suitable for forage that can be grazed without a significant decrease in wood production and other forest values.

Tables

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1948-90 at Ely, Nevada; 1957-90 at Lund, Nevada; 1928-90 at McGill, Nevada; 1958-90 at Ruth, Nevada; and 1966-90 at Duckwater, Nevada)

	Temperature						Precipitation			
Month				2 years in 10 will have--		Average		2 years in 10 will have--		Average
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	number of growing degree days*	Average	Less than--	More than--	number of days with 0.10 inch or more
	<u>° F</u>	<u>° F</u>	<u>° F</u>	<u>° F</u>	<u>° F</u>	<u>Units</u>	<u>In</u>	<u>In</u>	<u>In</u>	
ELY:										
January----	38.6	9.1	23.9	60	-21	2	0.72	0.30	1.08	2
February---	42.7	14.7	28.7	63	-14	9	.62	.19	.97	2
March-----	47.8	20.2	34.0	68	-4	33	.94	.38	1.42	3
April-----	57.2	26.1	41.6	76	6	124	.88	.33	1.39	3
May-----	66.8	33.6	50.2	85	16	330	1.10	.37	1.71	3
June-----	78.1	40.4	59.3	94	25	577	.73	.17	1.23	2
July-----	86.8	47.9	67.3	96	34	847	.66	.18	1.08	2
August-----	84.4	46.5	65.5	95	31	789	.72	.22	1.23	2
September--	75.7	37.4	56.6	90	19	499	.87	.14	1.46	1
October----	63.6	28.1	45.9	81	9	219	.74	.29	1.18	2
November---	49.5	18.7	34.1	70	-6	36	.64	.24	1.00	1
December---	40.9	11.1	26.0	61	-15	3	.70	.26	1.13	2
Yearly:										
Average---	61.0	27.8	44.4	---	---	---	---	---	---	---
Extreme---	100	-30	---	97	-22	---	---	---	---	---
Total-----	---	---	---	---	---	3,467	9.34	5.16	12.42	25
LUND:										
January----	43.1	13.7	28.4	62	-9	5	.71	.18	1.13	2
February---	47.8	19.2	33.5	67	-3	23	.72	.20	1.19	2
March-----	53.5	22.8	38.2	72	4	65	1.07	.30	1.74	3
April-----	61.7	28.6	45.1	80	11	189	.97	.31	1.50	3
May-----	71.4	36.4	53.9	88	21	415	1.00	.22	1.61	2
June-----	81.6	43.8	62.7	96	29	669	.82	.20	1.51	2
July-----	89.0	49.9	69.4	99	37	894	.76	.27	1.42	1
August-----	86.6	48.5	67.5	99	36	811	.98	.29	1.66	2
September--	79.2	40.5	59.8	92	25	576	.86	.23	1.52	2
October----	68.4	31.7	50.0	85	15	316	.85	.19	1.42	2
November---	53.7	21.9	37.8	73	2	58	.75	.27	1.19	2
December---	45.3	15.6	30.5	64	-7	7	.72	.32	1.25	2
Yearly:										
Average---	65.1	31.0	41.8	---	---	---	---	---	---	---
Extreme---	104	-18	---	100	-12	---	---	---	---	---
Total-----	---	---	---	---	---	4,027	10.21	4.36	13.97	25

See footnote at end of table.

TABLE 1.--TEMPERATURE AND PRECIPITATION--Continued

Month	Temperature						Precipitation			
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average number of growing degree days*	Average	2 years in 10 will have--		Average number of days with 0.10 inch or more
				Maximum temperature higher than--	Minimum temperature lower than--			Less than--	More than--	
	<u>° F</u>	<u>° F</u>	<u>° F</u>	<u>° F</u>	<u>° F</u>	<u>Units</u>	<u>In</u>	<u>In</u>	<u>In</u>	
MCGILL:										
January----	38.4	15.1	26.8	59	-10	6	0.55	0.18	0.86	1
February----	42.0	19.1	30.6	62	-6	15	.54	.14	.86	1
March-----	47.9	23.7	35.8	68	4	50	.69	.23	1.08	2
April-----	56.8	30.6	43.7	76	13	172	.92	.31	1.42	2
May-----	66.6	38.4	52.5	85	22	396	.95	.29	1.52	2
June-----	77.1	46.8	61.9	93	30	656	.75	.19	1.34	2
July-----	86.2	55.2	70.7	97	42	940	.71	.18	1.23	2
August-----	84.0	53.3	68.6	95	38	883	.84	.25	1.36	2
September--	75.6	43.8	59.7	89	27	590	.75	.21	1.41	2
October----	63.4	34.0	48.7	81	16	298	.75	.25	1.21	2
November---	49.3	23.6	36.5	70	2	64	.53	.20	.90	1
December---	41.2	17.7	29.5	61	-6	13	.56	.18	.96	1
Yearly:										
Average----	60.7	33.4	47.1	---	---	---	---	---	---	---
Extreme----	100	-25	---	97	-12	---	---	---	---	---
Total-----	---	---	---	---	---	4,083	8.54	5.36	10.98	20
RUTH:										
January----	36.7	4.9	20.8	56	-24	0	.92	.40	1.37	2
February----	40.2	10.3	25.3	60	-17	2	1.03	.16	1.77	3
March-----	45.4	17.0	31.2	66	-10	21	.87	.35	1.30	2
April-----	53.6	23.0	38.3	73	2	80	1.32	.36	2.09	3
May-----	63.7	30.9	47.3	83	12	256	1.16	.32	1.83	3
June-----	74.5	38.3	56.4	90	22	491	1.17	.25	1.96	3
July-----	83.3	45.2	64.2	93	29	746	.83	.22	1.38	2
August-----	80.9	43.9	62.4	91	28	699	1.09	.36	1.69	3
September--	72.1	33.7	52.9	86	15	382	.77	.19	1.29	2
October----	61.5	24.7	43.1	78	6	153	.94	.39	1.56	2
November---	47.4	15.7	31.5	69	-8	15	.88	.31	1.42	2
December---	39.0	6.6	22.8	58	-21	1	.93	.37	1.71	2
Yearly:										
Average----	58.2	24.5	41.3	---	---	---	---	---	---	---
Extreme----	95	-33	---	94	-28	---	---	---	---	---
Total-----	---	---	---	---	---	2,846	11.91	6.35	15.27	29

See footnote at end of table.

TABLE 1.--TEMPERATURE AND PRECIPITATION--Continued

	Temperature						Precipitation			
Month				2 years in 10 will have--		Average		2 years in 10 will have--		Average
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	number of growing degree days*	Average	Less than--	More than--	number of days with 0.10 inch or more
	<u>° F</u>	<u>° F</u>	<u>° F</u>	<u>° F</u>	<u>° F</u>	<u>Units</u>	<u>In</u>	<u>In</u>	<u>In</u>	
DUCKWATER:										
January----	39.3	15.0	27.1	64	-9	2	0.37	0.09	0.62	1
February---	45.8	19.9	32.8	66	-3	25	.51	.09	.95	1
March-----	53.1	25.7	39.4	71	8	78	.67	.29	1.26	2
April-----	61.5	30.8	46.2	81	15	195	.53	.15	.92	2
May-----	72.2	39.2	55.7	91	24	461	.82	.15	1.55	2
June-----	83.0	46.9	65.0	98	30	692	.60	.27	1.24	1
July-----	90.5	52.3	71.4	100	37	915	.77	.22	1.42	2
August-----	87.9	50.8	69.3	100	36	876	.88	.23	1.55	2
September--	79.3	42.7	61.0	94	27	592	.60	.12	1.18	1
October----	66.5	33.2	49.8	84	16	304	.79	.34	1.45	1
November---	51.6	23.8	37.7	70	5	56	.37	.17	.76	1
December---	41.4	16.6	29.0	65	-7	3	.37	.14	.67	1
Yearly:										
Average---	64.3	33.1	48.7	---	---	---	---	---	---	---
Extreme---	103	-19	---	102	-12	---	---	---	---	---
Total-----	---	---	---	---	---	4,199	7.28	3.14	9.38	17

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

TABLE 2.--FREEZE DATES IN SPRING AND FALL

(Recorded in the period 1948-90 at Ely, Nevada; 1957-90 at Lund, Nevada; 1928-90 at McGill, Nevada; 1958-90 at Ruth, Nevada; and 1966-90 at Duckwater, Nevada)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
ELY:			
Last freezing temperature in spring:			
1 year in 10 later than--	June 15	July 12	Aug. 20
2 years in 10 later than--	June 5	July 1	Aug. 5
5 years in 10 later than--	May 17	June 9	July 6
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 10	Sept. 3	Aug. 15
2 years in 10 earlier than--	Sept. 17	Sept. 7	Aug. 26
5 years in 10 earlier than--	Sept. 29	Sept. 15	Sept. 5
LUND:			
Last freezing temperature in spring:			
1 year in 10 later than--	May 19	June 2	July 2
2 years in 10 later than--	May 13	May 27	June 23
5 years in 10 later than--	May 1	May 17	June 5
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 25	Sept. 14	Sept. 5
2 years in 10 earlier than--	Oct. 2	Sept. 20	Sept. 11
5 years in 10 earlier than--	Oct. 15	Oct. 3	Sept. 21

TABLE 2.--FREEZE DATES IN SPRING AND FALL--Continued

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
MCGILL:			
Last freezing temperature in spring:			
1 year in 10 later than--	May 6	June 10	June 27
2 years in 10 later than--	May 9	May 31	June 18
5 years in 10 later than--	Apr. 25	May 13	May 31
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 30	Sept. 20	Sept. 6
2 years in 10 earlier than--	Oct. 7	Sept. 26	Sept. 13
5 years in 10 earlier than--	Oct. 20	Oct. 8	Sept. 26
RUTH:			
Last freezing temperature in spring:			
1 year in 10 later than--	July 2	Aug. 16	Sept. 11
2 years in 10 later than--	June 20	July 30	Aug. 28
5 years in 10 later than--	May 29	June 28	Aug. 1
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 3	Aug. 22	Aug. 18
2 years in 10 earlier than--	Sept. 8	Aug. 27	Aug. 21
5 years in 10 earlier than--	Sept. 16	Sept. 7	Aug. 29

TABLE 2.--FREEZE DATES IN SPRING AND FALL--Continued

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
BUCKWATER:			
Last freezing temperature in spring:			
1 year in 10 later than--	May 16	June 10	June 19
2 years in 10 later than--	May 9	June 1	June 10
5 years in 10 later than--	Apr. 27	May 16	May 25
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 2	Sept. 20	Sept. 10
2 years in 10 earlier than--	Oct. 8	Sept. 26	Sept. 16
5 years in 10 earlier than--	Oct. 21	Oct. 9	Sept. 27

TABLE 3.--GROWING SEASON

(Recorded in the period 1948-90 at Ely, Nevada;
1957-90 at Lund, Nevada; 1928-90 at McGill,
Nevada; 1958-90 at Ruth, Nevada; and 1966-90
at Duckwater, Nevada)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	<u>Days</u>	<u>Days</u>	<u>Days</u>
ELY:			
9 years in 10	116	82	34
8 years in 10	129	97	54
5 years in 10	154	125	91
2 years in 10	179	153	129
1 year in 10	192	167	148
LUND:			
9 years in 10	153	135	98
8 years in 10	163	144	110
5 years in 10	181	162	132
2 years in 10	199	180	154
1 year in 10	209	189	166
MCGILL:			
9 years in 10	168	136	109
8 years in 10	178	149	122
5 years in 10	197	174	147
2 years in 10	216	199	172
1 year in 10	226	213	185
RUTH:			
9 years in 10	90	37	7
8 years in 10	104	58	24
5 years in 10	131	97	57
2 years in 10	157	137	91
1 year in 10	171	158	108

TABLE 3.--GROWING SEASON--Continued

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	<u>Days</u>	<u>Days</u>	<u>Days</u>
DUCKWATER:			
9 years in 10	166	134	123
8 years in 10	176	147	133
5 years in 10	195	172	153
2 years in 10	215	196	173
1 year in 10	225	209	184

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	White Pine County	Eureka County	Total--	
				Area	Extent
		Acres	Acres	Acres	Pct
100	Pookaloo-Cavehill-Rock outcrop association-----	0	218,855	218,855	6.8
104	Pookaloo-Zimbob-Hyzen association-----	0	4,797	4,797	0.1
108	Pookaloo-Tecomar-Rock outcrop association-----	5	26,007	26,012	0.8
109	Hyzen-Cavehill association-----	0	20,473	20,473	0.6
110	Zimbob association-----	0	8,051	8,051	0.2
111	Zimbob-Hyzen-Rock outcrop association-----	0	11,554	11,554	0.4
113	Zimbob-Pookaloo association-----	0	82,257	82,257	2.5
119	Zimbob-Palino association-----	0	5,432	5,432	0.2
120	Tecomar-Pookaloo-Zimbob association-----	0	10,607	10,607	0.3
124	Tecomar-Pookaloo association-----	0	25,650	25,650	0.8
126	Tecomar-Xine-Pookaloo association-----	0	10,860	10,860	0.3
160	Zerk-Heist-Tosser association-----	0	16,875	16,875	0.5
162	Broyles-Kunzler-Heist association-----	0	2,265	2,265	0.1
166	Tosser-Pyrat-Linoyer association-----	0	5,925	5,925	0.2
170	Blimo-Hessing-Zerk association-----	0	3,485	3,485	0.1
173	Tulase-Yody-Heist association-----	0	7,128	7,128	0.2
174	Blimo-Pyrat association-----	0	10,829	10,829	0.3
179	Tulase-Pern association-----	0	7,845	7,845	0.2
181	Pyrat-Cowgil-Broyles association-----	0	11,165	11,165	0.3
185	Pyrat-Heist-Tulase association-----	0	54,586	54,586	1.7
189	Pyrat-Linoyer association-----	0	14,210	14,210	0.4
190	Cowgil-Yody-Fax association-----	0	13,859	13,859	0.4
192	Cowgil-Yody association-----	0	3,815	3,815	0.1
201	Hyzen-Pookaloo-Tecomar association-----	0	16,565	16,565	0.5
205	Hyzen-Hardzem-Rock outcrop association-----	0	5,495	5,495	0.2
220	Hutchley-McIvey-Suak association-----	0	4,810	4,810	0.1
223	Hutchley-McIvey-Pookaloo association-----	0	3,100	3,100	0.1
224	Hutchley-McIvey-Segura association-----	0	8,346	8,346	0.3
226	Hutchley-Tusel-Suak association-----	492	6,558	7,050	0.2
230	Linoyer-Katelana association-----	0	2,135	2,135	0.1
231	Linoyer very fine sandy loam, 0 to 2 percent slopes-----	0	1,997	1,997	0.1
232	Linoyer-Heist-Tulase association-----	0	18,772	18,772	0.6
233	Linoyer silt loam, 0 to 2 percent slopes-----	0	1,120	1,120	*
241	Katelana, level-Raph association-----	0	4,055	4,055	0.1
242	Katelana association-----	0	8,285	8,285	0.3
243	Katelana-Heist-Nyak association-----	0	3,345	3,345	0.1
244	Katelana-Raph association-----	0	1,920	1,920	0.1
246	Katelana-Blimo association-----	0	2,490	2,490	0.1
250	Sheffit-Katelana association-----	0	40,256	40,256	1.2
252	Sheffit-Equis association-----	0	9,552	9,552	0.3
253	Sheffit-Zorravista association-----	0	4,580	4,580	0.1
254	Sheffit-Boofuss association-----	0	3,724	3,724	0.1
255	Sheffit-Kunzler association-----	0	17,400	17,400	0.5
262	Equis silt loam, 0 to 2 percent slopes-----	0	1,330	1,330	*
266	Equis-Kolda association-----	0	10,450	10,450	0.3
267	Equis-Devilsgait association-----	0	4,345	4,345	0.1
270	Atlow-Maderbak-Rubble land association-----	0	18,245	18,245	0.6
271	Atlow association-----	0	20,553	20,553	0.6
275	Atlow-Upatad association-----	0	10,088	10,088	0.3
276	Stewval-Maderbak-Atlow association-----	0	3,975	3,975	0.1
279	Atlow-Broland-Yody association-----	0	2,950	2,950	0.1
282	Palino very gravelly loam, 2 to 15 percent slopes-----	0	173,029	173,029	5.3
283	Palino-Urmafot association-----	0	28,733	28,733	0.9
286	Palino-Shabliss association-----	0	84,978	84,978	2.6
287	Palino-Wintermute association-----	0	8,136	8,136	0.3
288	Palino-Yody-Broland association-----	0	14,860	14,860	0.5
290	Palino-Shabliss-Tulase association-----	0	29,348	29,348	0.9
291	Urmafot-Borvant-Biken association-----	0	9,720	9,720	0.3
292	Palino-Urmafot-Urmafot, very shallow association-----	0	25,635	25,635	0.8
295	Palino-Roden association-----	0	13,315	13,315	0.4
296	Palino-Urmafot-Palino, steep association-----	0	64,266	64,266	2.0
297	Urmafot-Amelar-Izar association-----	0	5,050	5,050	0.2

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	White Pine County	Eureka County	Total--	
				Area	Extent
		Acres	Acres	Acres	Pct
300	Playas-Orupa association-----	0	29,190	29,190	0.9
310	Dune land-Playas association-----	0	995	995	*
321	Palinor association-----	0	16,225	16,225	0.5
322	Palinor-Roden-Urmafot association-----	0	3,625	3,625	0.1
323	Urmafot-Bobs-Palinor association-----	0	29,587	29,587	0.9
326	Palinor-Urmafot-Roden association-----	0	6,072	6,072	0.2
327	Urmafot-Cassiro-Biken association-----	0	5,840	5,840	0.2
328	Urmafot-Tecomar-Pookaloo association-----	0	3,565	3,565	0.1
334	Parisa-Palinor-Shabliss association-----	0	17,890	17,890	0.6
336	Parisa gravelly loam, 2 to 8 percent slopes-----	0	25,726	25,726	0.8
337	Parisa-Wintermute association-----	0	845	845	*
338	Parisa-Palinor-Tulase association-----	0	6,025	6,025	0.2
340	Izar association-----	0	2,402	2,402	0.1
346	Izar-Roden-Zerk association-----	0	1,410	1,410	*
351	Heist-Tulase association-----	0	16,998	16,998	0.5
353	Heist silt loam, 0 to 4 percent slopes-----	0	9,715	9,715	0.3
356	Heist-Wintermute association-----	0	3,085	3,085	0.1
360	Belmill association-----	0	3,830	3,830	0.1
361	Belmill-Cowgil-Selti association-----	0	11,050	11,050	0.3
372	Automal gravelly silt loam, 2 to 4 percent slopes-----	0	8,355	8,355	0.3
373	Automal-Wintermute association-----	0	14,740	14,740	0.5
380	Palinor-Parisa association-----	0	11,616	11,616	0.4
411	Cassiro association-----	0	7,329	7,329	0.2
413	Cassiro-Fax-Belmill association-----	0	2,430	2,430	0.1
414	Cassiro-Belmill association-----	0	5,303	5,303	0.2
421	Wintermute gravelly sandy loam, 0 to 4 percent slopes-----	0	20,275	20,275	0.6
425	Wintermute association-----	0	9,050	9,050	0.3
434	Pookaloo-Hyzen association-----	0	39,495	39,495	1.2
436	Pookaloo-Hyzen-Cavehill association-----	0	35,223	35,223	1.1
437	Pookaloo-Urmafot-Tulase association-----	0	11,762	11,762	0.4
440	Hessing-Zerk association-----	0	8,225	8,225	0.3
450	Shabliss-Yody association-----	0	20,210	20,210	0.6
455	Shabliss-Tulase-Linoyer association-----	0	14,341	14,341	0.4
458	Shabliss-Pyrat-Palinor association-----	0	10,650	10,650	0.3
471	Hessing-Tulase association-----	0	3,065	3,065	0.1
472	Broyles-Blimo association-----	0	2,930	2,930	0.1
473	Broyles-Sheffit-Katelana association-----	0	4,130	4,130	0.1
480	Pioche-Cropper association-----	0	9,529	9,529	0.3
481	Pioche-Segura-Cropper association-----	0	42,568	42,568	1.3
483	Pioche-Upatad-Birchcreek association-----	0	2,515	2,515	0.1
484	Pioche-Birchcreek-Cropper association-----	0	3,310	3,310	0.1
486	Pioche-Cropper-Upatad association-----	0	8,840	8,840	0.3
489	Pioche-McIvey-Birchcreek association-----	0	14,010	14,010	0.4
490	Kunzler loam, 0 to 2 percent slopes-----	0	7,086	7,086	0.2
491	Kunzler-Katelana association-----	0	10,125	10,125	0.3
500	Segura-McIvey-Hutchley association-----	390	10,764	11,154	0.3
510	Onkeyo-Cavehill-Pookaloo association-----	0	2,005	2,005	0.1
520	McIvey-Pioche association-----	0	15,685	15,685	0.5
531	Duffer-Uwell association-----	0	13,622	13,622	0.4
534	Duffer-Kolda association-----	0	14,142	14,142	0.4
540	Kolda-Sheffit-Equis association-----	0	5,212	5,212	0.2
541	Kolda-Duffer association-----	0	4,702	4,702	0.1
542	Devilsgait-Duffer association-----	0	2,615	2,615	0.1
550	Molion-Unsel-Breko association-----	0	2,285	2,285	0.1
552	Molion very gravelly sandy loam, 2 to 8 percent slopes-----	0	2,450	2,450	0.1
561	McIvey-Pioche-Upatad association-----	0	2,395	2,395	0.1
564	McIvey-Chen-Suak association-----	0	4,515	4,515	0.1
566	McIvey-Segura-Cropper association-----	0	4,810	4,810	0.1
567	McIvey-Birchcreek-Hutchley association-----	0	13,395	13,395	0.4
570	Yody-Blimo-McConnel association-----	0	4,763	4,763	0.1
573	Yody-Palinor-Shabliss association-----	0	5,244	5,244	0.2
575	Yody-Broyles association-----	0	4,175	4,175	0.1

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	White Pine County	Eureka County	Total--	
				Area	Extent
		Acres	Acres	Acres	Pct
578	Yody gravelly sandy loam, 2 to 4 percent slopes-----	0	5,200	5,200	0.2
580	Uwell-Kelk association-----	0	7,217	7,217	0.2
590	Raph-Katelana-Zimwala association-----	0	5,080	5,080	0.2
602	Blimo-Nyak-Raph association-----	0	3,875	3,875	0.1
603	Blimo-Uwell association-----	0	9,380	9,380	0.3
605	Blimo-Heist-Tosser association-----	0	4,370	4,370	0.1
610	Broyles-Heist-Unsel association-----	0	3,955	3,955	0.1
620	Unsel-Broyles association-----	0	4,105	4,105	0.1
621	Nyala-Breko-Unsel association-----	0	1,195	1,195	*
630	Molion-Haarvar association-----	0	2,965	2,965	0.1
631	Roden-Haarvar association-----	0	4,435	4,435	0.1
632	Roden-Haarvar association, steep-----	0	3,480	3,480	0.1
633	Roden-Izar association-----	0	25,438	25,438	0.8
640	Uwell-Katelana association-----	0	2,518	2,518	0.1
642	Kunzler-Linoyer association-----	0	4,270	4,270	0.1
643	Kunzler-Bylo-Zimwala association-----	0	4,840	4,840	0.1
645	Kunzler-Blimo-Uwell association-----	0	2,035	2,035	0.1
650	Eaglepass-Kyler-Rock outcrop association-----	0	10,580	10,580	0.3
660	Stewval-Rock outcrop complex-----	0	9,748	9,748	0.3
670	Cavehill-Grink-Rock outcrop association-----	0	4,565	4,565	0.1
680	Genaw-Puett-Abgese association-----	0	9,680	9,680	0.3
690	Devilsgait-Cassiro association-----	0	2,017	2,017	0.1
710	Raph loam, 0 to 2 percent slopes-----	0	7,082	7,082	0.2
730	Zimwala-Uwell-Zimwala, moist association-----	0	6,361	6,361	0.2
731	Zimwala-Uwell association-----	0	11,058	11,058	0.3
740	Orupa-Uwell association-----	0	4,810	4,810	0.1
741	Orupa association-----	0	1,925	1,925	0.1
750	Upatad-Atlow association-----	0	7,235	7,235	0.2
751	Upatad-Pookaloo association-----	0	8,080	8,080	0.2
752	Upatad-Atlow-Pioche association-----	0	15,715	15,715	0.5
753	Upatad-Cropper-Atlow association-----	0	5,890	5,890	0.2
760	Segura-Upatad-Cropper association-----	0	12,815	12,815	0.4
762	Segura-Eoj-Cassiro association-----	0	2,025	2,025	0.1
763	Segura-Pioche-McIvey association-----	0	20,600	20,600	0.6
770	Cropper-Birchcreek-Segura association-----	0	10,185	10,185	0.3
774	Cropper-Rubble land association-----	0	16,450	16,450	0.5
780	Bobs-Orr-Urmafot association-----	0	6,413	6,413	0.2
783	Bobs very gravelly loam, 2 to 8 percent slopes-----	0	10,825	10,825	0.3
790	Bylo-Tulase association-----	0	10,191	10,191	0.3
793	Bylo silt loam, 0 to 2 percent slopes-----	0	4,955	4,955	0.2
800	Broland association-----	0	5,892	5,892	0.2
801	Broland very gravelly loam, 4 to 8 percent slopes-----	0	18,410	18,410	0.6
802	Broland-Yody association-----	0	31,866	31,866	1.0
803	Broland-Broyles association-----	0	4,135	4,135	0.1
810	Yody-Fax association-----	0	9,235	9,235	0.3
822	Pits-Dumps complex-----	0	3,620	3,620	0.1
823	Dumps-----	0	3,880	3,880	0.1
830	Genaw-Tulase association-----	0	1,105	1,105	*
842	Orr-Fax association-----	0	3,530	3,530	0.1
850	Onkeyo-Pookaloo-Adobe association-----	0	4,156	4,156	0.1
851	Grink-Onkeyo-Xine association-----	0	6,215	6,215	0.2
852	Grink-Onkeyo-Halacan association-----	0	4,070	4,070	0.1
870	Amelar-Eoj association-----	0	6,917	6,917	0.2
871	Amelar-Urmafot association-----	0	6,308	6,308	0.2
874	Amelar-Pookaloo-Tulase association-----	0	8,035	8,035	0.2
875	Amelar-Eoj-Hardol association-----	0	2,775	2,775	0.1
876	Amelar-Xine-Halacan association-----	0	4,925	4,925	0.2
880	Wredah-Amelar-Orr association-----	0	2,760	2,760	0.1
900	Abgese-Roden-Orr association-----	0	3,990	3,990	0.1
902	Abgese-Risley-Roden association-----	0	5,005	5,005	0.2
911	Devilsgait-Duffer-Kunzler association-----	0	3,950	3,950	0.1
913	Devilsgait silt loam, 0 to 2 percent slopes-----	0	1,065	1,065	*

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	White Pine County	Eureka County	Total--	
		Acres	Acres	Area Acres	Extent Pct
920	Abgese-Yody-Shabliss association-----	0	11,990	11,990	0.4
930	Tosser loam, 0 to 4 percent slopes-----	0	4,600	4,600	0.1
940	Nyak-Heist association-----	0	4,365	4,365	0.1
951	Nyak-Uwell-Pern association-----	0	6,665	6,665	0.2
960	Doten-Bylo-Heist association-----	0	4,210	4,210	0.1
970	Doten association-----	0	9,195	9,195	0.3
981	Breko-Armespan association-----	0	1,490	1,490	*
982	Breko-Yody association-----	0	2,015	2,015	0.1
990	Blimo-Kunzler-Pern association-----	0	11,010	11,010	0.3
991	Blimo-Zerk association-----	0	12,675	12,675	0.4
992	Blimo-Linoyer-Tulase association-----	0	7,375	7,375	0.2
1000	Linoyer-Unsel association-----	0	2,780	2,780	0.1
1010	Hunnton-Chiara association-----	0	18,760	18,760	0.6
1012	Hunnton-Wieland-Kelk association-----	0	2,190	2,190	0.1
1020	Sonoma-Kelk association-----	0	4,330	4,330	0.1
1030	Chiara silt loam, 2 to 15 percent slopes-----	0	1,870	1,870	0.1
1032	Chiara-Kelk association-----	0	5,095	5,095	0.2
1050	Yody-Dewar association, cool-----	0	8,655	8,655	0.3
1081	Bobs-Fax-Parisa association-----	0	8,008	8,008	0.2
1090	Fax-Hunnton-Cassiro association-----	0	7,995	7,995	0.2
1120	Kunzler-Sycomat association-----	0	43,484	43,484	1.3
1122	Kunzler-Pern association-----	0	1,125	1,125	*
1130	Duffer-Equis association-----	0	27,985	27,985	0.9
1131	Duffer-Devilsgait association-----	0	11,200	11,200	0.3
1132	Duffer silt loam, 0 to 2 percent slopes-----	0	13,180	13,180	0.4
1141	Shabliss-Pyrat association-----	0	17,050	17,050	0.5
1151	Zimbo-Rock outcrop association-----	0	6,102	6,102	0.2
1152	Zimbo-Eaglepass association-----	0	6,070	6,070	0.2
1171	Haunchee-Hardol-Halacan association-----	0	8,270	8,270	0.3
1173	Haunchee-Hardol-Rock outcrop association-----	0	1,956	1,956	0.1
1174	Haunchee-Wardbay-Hardzem association-----	0	37,605	37,605	1.2
1175	Haunchee-Hardol-Hardzem association-----	0	30,595	30,595	0.9
1176	Haunchee-Hardzem-Rock outcrop association-----	0	16,230	16,230	0.5
1178	Haunchee-Hardol-Xine association-----	0	8,870	8,870	0.3
1180	Eoj-McIvey association-----	0	645	645	*
1190	Katelana-Boofuss association-----	0	8,025	8,025	0.2
1201	Biken-Orr association-----	0	1,270	1,270	*
1202	Biken-Urmafot association-----	0	4,425	4,425	0.1
1221	Cavehill-Grink-Onkeyo association-----	0	3,960	3,960	0.1
1222	Grink-Amelar-Xine association-----	0	4,580	4,580	0.1
1230	Garfan-McIvey-Hutchley association-----	0	2,015	2,015	0.1
1240	Biken association-----	0	16,965	16,965	0.5
1242	Biken-Palinor-Barfan association-----	0	2,115	2,115	0.1
1243	Biken-Breko association-----	0	3,510	3,510	0.1
1245	Biken-Tulase association-----	0	7,159	7,159	0.2
1251	Alley-Yody-Cowgill association-----	0	14,280	14,280	0.4
1260	Urmafot association-----	0	18,140	18,140	0.6
1270	Boofuss-Equis association-----	0	28,200	28,200	0.9
1280	Palinor-Molion-Broland association-----	0	8,770	8,770	0.3
1282	Urmafot-Palinor association-----	0	21,315	21,315	0.7
1283	Urmafot-Fax association-----	0	5,650	5,650	0.2
1287	Palinor-Izar-Biken association-----	0	4,545	4,545	0.1
1288	Urmafot-Cavehill-Pookaloo association-----	0	3,910	3,910	0.1
1291	Maderbak-McIvey association-----	0	3,912	3,912	0.1
1300	Barfan-Tulase association-----	0	2,230	2,230	0.1
1310	Kunzler-Duffer association-----	0	9,128	9,128	0.3
1321	Sycomat sandy loam, 0 to 4 percent slopes-----	0	8,375	8,375	0.3
1330	Yody-Dewar association-----	0	20,650	20,650	0.6
1340	Pyrat-Tulase association-----	0	10,320	10,320	0.3
1351	Hyzen-Kyler-Rock outcrop association-----	0	1,030	1,030	*
1360	Eganroc-Hyzen-Hardzem association-----	0	14,936	14,936	0.5
1370	Wardbay-Haunchee-Hardol association-----	0	10,049	10,049	0.3

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	White Pine County	Eureka County	Total--	
		Acres	Acres	Area Acres	Extent Pct
1372	Wardbay-Hardol-Adobe association-----	1,093	28,157	29,250	0.9
1374	Wardbay-Adobe-Haunchee association-----	0	11,858	11,858	0.4
1380	Cavehill-Hardol-Eganroc association-----	0	6,785	6,785	0.2
1383	Cavehill-Rock outcrop association-----	0	11,500	11,500	0.4
1384	Cavehill-Haunchee association-----	0	4,514	4,514	0.1
1385	Cavehill-Hyzen-Xine association-----	0	3,935	3,935	0.1
1390	Chen-Segura-McIvey association-----	100	11,745	11,845	0.4
1391	Chen-Tusel association-----	0	5,862	5,862	0.2
1392	Chen-McIvey-Birchcreek association-----	0	12,345	12,345	0.4
1400	Suak-Segura-McIvey association-----	0	7,300	7,300	0.2
1430	Hardzem-Haunchee-Wardbay association-----	0	7,420	7,420	0.2
1431	Hardzem-Hackwood-Guiser association-----	0	3,338	3,338	0.1
1451	Birchcreek-Segura-Chen association-----	0	16,360	16,360	0.5
1460	Unsel gravelly fine sandy loam, 2 to 8 percent slopes-----	0	1,870	1,870	0.1
1480	Amelar-Bobs association-----	0	2,585	2,585	0.1
1491	Pyrat-Palino-Tulase association-----	0	8,655	8,655	0.3
1492	Pyrat-Shabliss-Linoyer association-----	0	3,826	3,826	0.1
1493	Pyrat-Parisa-Tulase association-----	0	10,045	10,045	0.3
1494	Pyrat-McConnel association-----	0	9,136	9,136	0.3
1510	Raph-Zimwala-Heist association-----	0	3,465	3,465	0.1
1511	Hessing-Uwell-Zimwala association-----	0	5,890	5,890	0.2
1520	Fax-Yody-Broland association-----	0	4,196	4,196	0.1
1550	Haunchee-Muiral-Wardbay association-----	0	8,509	8,509	0.3
1560	Adobe-Haunchee-Hardzem association-----	0	570	570	*
1570	Nyala-Broyles association-----	0	1,165	1,165	*
1580	Wredah-Selti-Tulase association-----	0	15,905	15,905	0.5
1610	Sheffit-Blimo association-----	0	37,341	37,341	1.2
1700	Garfan-McIvey association-----	0	1,425	1,425	*
1800	Pookaloo-Onkeyo-Cavehill association-----	0	6,455	6,455	0.2
1810	Ilton-Yody-Blimo association-----	0	1,652	1,652	0.1
1820	Sodhouse association-----	0	5,330	5,330	0.2
1821	Sodhouse-Palino association-----	0	7,500	7,500	0.2
1830	Armespan-Cliffdown-Candelaria association-----	0	7,685	7,685	0.2
1850	Clan Alpine-Rubble land-Rock outcrop association-----	0	8,090	8,090	0.2
1860	Hackwood-Chen-Tusel association-----	0	3,160	3,160	0.1
	Water-----	0	4,100	4,100	0.1
	Total-----	2,080	3,234,192	3,236,272	100.0

* Less than 0.05 percent.

TABLE 5.--RANGELAND SEEDING

(Some terms that describe restrictive soil features are defined in the Glossary)

Soil name and map symbol	Suitability	Restrictive features
100*: Pookaloo-----	Poorly suited-----	Droughty, small stones.
Cavehill-----	Poorly suited-----	Small stones.
Rock outcrop-----	Not rated.	
104*: Pookaloo-----	Poorly suited-----	Droughty, small stones.
Zimbob-----	Poorly suited-----	Droughty, small stones.
Hyzen-----	Poorly suited-----	Droughty, large stones.
108*: Pookaloo-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
Rock outcrop-----	Not rated.	
109*: Hyzen-----	Poorly suited-----	Droughty, large stones.
Cavehill-----	Poorly suited-----	Small stones.
Hyzen-----	Poorly suited-----	Droughty, large stones.
110*: Zimbob-----	Poorly suited-----	Droughty, small stones.
Zimbob-----	Poorly suited-----	Droughty, small stones.
111*: Zimbob-----	Poorly suited-----	Droughty, small stones, depth to rock.
Hyzen-----	Poorly suited-----	Droughty, large stones.
Rock outcrop-----	Not rated.	
113*: Zimbob-----	Poorly suited-----	Droughty, small stones.
Zimbob-----	Poorly suited-----	Droughty, small stones, depth to rock.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
119*: Zimbob-----	Poorly suited-----	Droughty, small stones.
Palinor-----	Poorly suited-----	Droughty.
120*: Tecomar-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Zimbob-----	Poorly suited-----	Droughty, small stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
124*:		
Tecomar-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
126*:		
Tecomar-----	Poorly suited-----	Droughty, small stones.
Xine-----	Poorly suited-----	Small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
160*:		
Zerk-----	Poorly suited-----	Too arid.
Heist-----	Suited-----	Too arid, excess salt.
Tosser-----	Suited-----	Too arid, droughty.
162*:		
Broyles-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Kunzler-----	Suited-----	Too arid.
Heist-----	Suited-----	Too arid, excess salt.
166*:		
Tosser-----	Suited-----	Too arid, droughty.
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Linoyer-----	Poorly suited-----	Too arid.
170*:		
Blimo-----	Suited-----	Too arid, excess salt.
Hessing-----	Poorly suited-----	Too arid, excess salt.
Zerk-----	Poorly suited-----	Too arid.
173*:		
Tulase-----	Suited-----	Too arid.
Yody-----	Suited-----	Too arid, excess salt.
Heist-----	Suited-----	Too arid, excess salt.
174*:		
Blimo-----	Suited-----	Too arid, excess salt.
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
179*:		
Tulase-----	Suited-----	Too arid.
Pern-----	Suited-----	Too arid
181*:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Cowgil-----	Poorly suited-----	Droughty, small stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
181*: Broyles-----	Poorly suited-----	Too arid, excess salt, excess sodium.
185*: Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Heist-----	Suited-----	Too arid, excess salt.
Tulase-----	Suited-----	Too arid.
189*: Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Linoyer-----	Poorly suited-----	Too arid.
190*: Cowgil-----	Poorly suited-----	Droughty, small stones.
Yody-----	Suited-----	Too arid, excess salt.
Fax-----	Poorly suited-----	Droughty, small stones.
192*: Cowgil-----	Poorly suited-----	Droughty, small stones.
Yody-----	Suited-----	Too arid, excess salt.
201*: Hyzen-----	Poorly suited-----	Droughty, large stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
205*: Hyzen-----	Poorly suited-----	Droughty, large stones, erodes easily.
Hardzem-----	Poorly suited-----	Droughty, small stones.
Rock outcrop-----	Not rated.	
220*: Hutchley-----	Poorly suited-----	Droughty, small stones.
McIvey-----	Poorly suited-----	Small stones.
Suak-----	Poorly suited-----	Droughty, small stones.
223*: Hutchley-----	Poorly suited-----	Droughty, small stones.
McIvey-----	Poorly suited-----	Small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
224*: Hutchley-----	Poorly suited-----	Droughty, small stones.
McIvey-----	Poorly suited-----	Small stones.
Segura-----	Poorly suited-----	Droughty.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
226*:		
Hutchley-----	Poorly suited-----	Droughty, small stones.
Tusel-----	Well suited.	
Suak-----	Poorly suited-----	Droughty, small stones.
230*:		
Linoyer-----	Poorly suited-----	Too arid, soil blowing.
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
231-----	Poorly suited-----	Too arid, soil blowing.
Linoyer		
232*:		
Linoyer-----	Poorly suited-----	Too arid, soil blowing.
Heist-----	Suited-----	Too arid, excess salt.
Tulase-----	Suited-----	Too arid.
233-----	Poorly suited-----	Too arid, soil blowing.
Linoyer		
241*:		
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Raph-----	Poorly suited-----	Too arid.
242*:		
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
243*:		
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Heist-----	Suited-----	Too arid, excess salt.
Nyak-----	Suited-----	Too arid.
244*:		
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Raph-----	Poorly suited-----	Too arid.
246*:		
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Blimo-----	Suited-----	Too arid, excess salt.
250*:		
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
252*:		
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
253*: Sheffit-----	Poorly suited-----	Rooting depth, excess salt, soil blowing.
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Zorravista-----	Poorly suited-----	Droughty, too sandy, excess salt.
254*: Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Boofuss-----	Poorly suited-----	Excess salt, excess sodium.
255*: Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Kunzler-----	Suited-----	Too arid.
262----- Equis	Poorly suited-----	Rooting depth, excess salt, excess sodium.
266*: Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Kolda-----	Poorly suited-----	Excess salt.
267*: Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Devilsgait-----	Well suited.	
270*: Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
Maderbak-----	Poorly suited-----	Small stones.
Rubble land-----	Poorly suited-----	Too arid, droughty, large stones.
271*: Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
275*: Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
Upatad-----	Poorly suited-----	Droughty, small stones.
276*: Stewval-----	Poorly suited-----	Too arid, droughty, small stones.
Maderbak-----	Poorly suited-----	Small stones.
Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
279*: Atlow-----	Poorly suited-----	Too arid, droughty, small stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
279*: Broland-----	Poorly suited-----	Droughty, rooting depth.
Yody-----	Suited-----	Too arid, excess salt.
282----- Palinor	Poorly suited-----	Droughty, small stones.
283*: Palinor-----	Poorly suited-----	Droughty.
Urmafot-----	Poorly suited-----	Droughty, small stones.
286*: Palinor-----	Poorly suited-----	Droughty.
Shabliss-----	Poorly suited-----	Too arid, droughty.
287*: Palinor-----	Poorly suited-----	Droughty.
Wintermute-----	Poorly suited-----	Too arid.
288*: Palinor-----	Poorly suited-----	Droughty.
Yody-----	Suited-----	Too arid, excess salt.
Broland-----	Poorly suited-----	Droughty, rooting depth.
290*: Palinor-----	Poorly suited-----	Droughty.
Shabliss-----	Poorly suited-----	Too arid, droughty.
Tulase-----	Suited-----	Too arid.
291*: Urmafot-----	Poorly suited-----	Droughty, small stones.
Borvant-----	Poorly suited-----	Droughty, small stones.
Biken-----	Poorly suited-----	Droughty, small stones.
292*: Palinor-----	Poorly suited-----	Droughty.
Urmafot-----	Poorly suited-----	Droughty, small stones.
Urmafot-----	Poorly suited-----	Droughty.
295*: Palinor-----	Poorly suited-----	Droughty.
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
296*: Palinor-----	Poorly suited-----	Droughty.
Urmafot-----	Poorly suited-----	Droughty, small stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
296*: Palinor-----	Poorly suited-----	Droughty, small stones.
297*: Urmafot-----	Poorly suited-----	Droughty, small stones.
Amelar-----	Poorly suited-----	Small stones.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
300*: Playas-----	Poorly suited-----	Too arid, droughty, excess salt.
Orupa-----	Poorly suited-----	Excess salt.
310*: Dune land-----	Poorly suited-----	Too arid, droughty, too sandy.
Playas-----	Poorly suited-----	Too arid, droughty, excess salt.
321*: Palinor-----	Poorly suited-----	Droughty.
Palinor-----	Poorly suited-----	Droughty.
322*: Palinor-----	Poorly suited-----	Droughty.
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
Urmafot-----	Poorly suited-----	Droughty, small stones.
323*: Urmafot-----	Poorly suited-----	Droughty, small stones.
Bobs-----	Poorly suited-----	Droughty.
Palinor-----	Poorly suited-----	Droughty.
326*: Palinor-----	Poorly suited-----	Droughty.
Urmafot-----	Poorly suited-----	Droughty.
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
327*: Urmafot-----	Poorly suited-----	Droughty, small stones.
Cassiro-----	Poorly suited-----	Rooting depth.
Biken-----	Poorly suited-----	Droughty, small stones.
328*: Urmafot-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
334*: Parisa-----	Poorly suited-----	Droughty.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
334*:		
Palinor-----	Poorly suited-----	Droughty.
Shabliss-----	Poorly suited-----	Too arid, droughty.
336-----	Poorly suited-----	Droughty.
Parisa		
337*:		
Parisa-----	Poorly suited-----	Droughty.
Wintermute-----	Poorly suited-----	Too arid.
338*:		
Parisa-----	Poorly suited-----	Droughty.
Palinor-----	Poorly suited-----	Droughty.
Tulase-----	Suited-----	Too arid.
340*:		
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
346*:		
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
Zerk-----	Poorly suited-----	Too arid.
351*:		
Heist-----	Suited-----	Too arid, excess salt.
Tulase-----	Suited-----	Too arid.
353-----	Suited-----	Too arid, excess salt.
Heist		
356*:		
Heist-----	Suited-----	Too arid, excess salt.
Wintermute-----	Poorly suited-----	Too arid.
360*:		
Belmill-----	Suited-----	Too arid, droughty.
Belmill-----	Suited-----	Too arid, droughty.
361*:		
Belmill-----	Suited-----	Too arid, droughty.
Cowgil-----	Poorly suited-----	Droughty, small stones.
Selti-----	Poorly suited-----	Small stones.
372-----	Suited-----	Too arid.
Automal		
373*:		
Automal-----	Suited-----	Too arid.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
373*: Wintermute-----	Poorly suited-----	Too arid.
380*: Palinor-----	Poorly suited-----	Droughty.
Parisa-----	Poorly suited-----	Droughty.
411*: Cassiro-----	Poorly suited-----	Rooting depth.
Cassiro-----	Poorly suited-----	Rooting depth.
413*: Cassiro-----	Poorly suited-----	Rooting depth.
Fax-----	Poorly suited-----	Droughty, small stones.
Belmill-----	Suited-----	Too arid, droughty.
414*: Cassiro-----	Poorly suited-----	Rooting depth.
Belmill-----	Suited-----	Too arid, droughty.
421----- Wintermute	Poorly suited-----	Too arid, soil blowing.
425*: Wintermute-----	Poorly suited-----	Too arid, soil blowing.
Wintermute-----	Poorly suited-----	Too arid.
434*: Pookaloo-----	Poorly suited-----	Droughty, small stones, erodes easily.
Hyzen-----	Poorly suited-----	Droughty, large stones.
Hyzen-----	Poorly suited-----	Droughty, large stones.
436*: Pookaloo-----	Poorly suited-----	Droughty, small stones.
Hyzen-----	Poorly suited-----	Droughty, large stones.
Cavehill-----	Poorly suited-----	Small stones.
437*: Pookaloo-----	Poorly suited-----	Droughty, small stones.
Urmafot-----	Poorly suited-----	Droughty, small stones.
Tulase-----	Suited-----	Too arid.
440*: Hessing-----	Poorly suited-----	Too arid, excess salt.
Zerk-----	Poorly suited-----	Too arid.
450*: Shabliss-----	Poorly suited-----	Too arid, droughty.
Yody-----	Suited-----	Too arid, excess salt

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
455*: Shabliss-----	Poorly suited-----	Too arid, droughty.
Tulase-----	Suited-----	Too arid.
Lincyer-----	Poorly suited-----	Too arid.
458*: Shabliss-----	Poorly suited-----	Too arid, droughty.
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Palinor-----	Poorly suited-----	Droughty.
471*: Hessing-----	Poorly suited-----	Too arid, excess salt.
Tulase-----	Suited-----	Too arid.
472*: Broyles-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Blimo-----	Suited-----	Too arid, excess salt.
473*: Broyles-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
480*: Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Cropper-----	Poorly suited-----	Droughty, small stones.
481*: Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Segura-----	Poorly suited-----	Droughty.
Cropper-----	Poorly suited-----	Droughty, small stones.
483*: Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Upatad-----	Poorly suited-----	Droughty, small stones.
Birchcreek-----	Poorly suited-----	Small stones.
484*: Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Birchcreek-----	Poorly suited-----	Small stones.
Cropper-----	Poorly suited-----	Droughty, small stones.
486*: Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Cropper-----	Poorly suited-----	Droughty, small stones.
Upatad-----	Poorly suited-----	Droughty, small stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
489*: Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
McIvey-----	Poorly suited-----	Small stones.
Birchcreek-----	Poorly suited-----	Small stones.
490----- Kunzler	Suited-----	Too arid.
491*: Kunzler-----	Suited-----	Too arid.
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
500*: Segura-----	Poorly suited-----	Droughty.
McIvey-----	Poorly suited-----	Small stones.
Hutchley-----	Poorly suited-----	Droughty, small stones.
510*: Onkeyo-----	Poorly suited-----	Droughty, small stones.
Cavehill-----	Poorly suited-----	Small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
520*: McIvey-----	Poorly suited-----	Small stones.
Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
531*: Duffer-----	Poorly suited-----	Excess salt.
Uwell-----	Suited-----	Too arid, excess salt.
534*: Duffer-----	Poorly suited-----	Excess salt.
Duffer-----	Poorly suited-----	Excess salt.
Kolda-----	Poorly suited-----	Excess salt.
540*: Kolda-----	Poorly suited-----	Excess salt.
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Equis-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
541*: Kolda-----	Poorly suited-----	Excess salt.
Duffer-----	Poorly suited-----	Excess salt.
542*: Devilsgait-----	Well suited.	
Devilsgait-----	Well suited.	

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
542*: Duffer-----	Poorly suited-----	Excess salt.
550*: Molion-----	Poorly suited-----	Too arid, droughty, small stones.
Unsel-----	Poorly suited-----	Too arid.
Breko-----	Poorly suited-----	Too arid.
552----- Molion	Poorly suited-----	Too arid, droughty, small stones.
561*: McIvey-----	Poorly suited-----	Small stones.
Pioche-----	Poorly suited-----	Droughty, small stones.
Upatad-----	Poorly suited-----	Droughty, small stones.
564*: McIvey-----	Poorly suited-----	Small stones.
Chen-----	Poorly suited-----	Droughty, small stones, rooting depth.
Suak-----	Poorly suited-----	Droughty, small stones.
566*: McIvey-----	Suited-----	Droughty.
Segura-----	Poorly suited-----	Droughty.
Cropper-----	Poorly suited-----	Droughty, small stones.
567*: McIvey-----	Suited-----	Erodes easily.
Birchcreek-----	Poorly suited-----	Small stones.
Hutchley-----	Poorly suited-----	Droughty, small stones.
570*: Yody-----	Suited-----	Too arid, excess salt.
Blimo-----	Suited-----	Too arid, excess salt.
McConnel-----	Poorly suited-----	Excess salt.
573*: Yody-----	Suited-----	Too arid, excess salt.
Palinor-----	Poorly suited-----	Droughty.
Shabliss-----	Poorly suited-----	Too arid, droughty.
575*: Yody-----	Suited-----	Too arid, excess salt.
Broyles-----	Poorly suited-----	Too arid, excess salt, excess sodium.
578----- Yody	Suited-----	Too arid, excess salt.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
580*: Uwell-----	Suited-----	Too arid, excess salt.
Kelk-----	Poorly suited-----	Excess salt.
590*: Raph-----	Poorly suited-----	Too arid.
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Zimwala-----	Poorly suited-----	Too arid, excess salt.
602*: Blimo-----	Suited-----	Too arid, excess salt.
Nyak-----	Suited-----	Too arid.
Raph-----	Poorly suited-----	Too arid.
603*: Blimo-----	Suited-----	Too arid, excess salt.
Uwell-----	Suited-----	Too arid, excess salt.
605*: Blimo-----	Suited-----	Too arid, excess salt.
Heist-----	Suited-----	Too arid, excess salt.
Tosser-----	Suited-----	Too arid, droughty.
610*: Broyles-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Heist-----	Suited-----	Too arid, excess salt.
Unsel-----	Poorly suited-----	Too arid.
620*: Unsel-----	Poorly suited-----	Too arid, soil blowing.
Broyles-----	Poorly suited-----	Too arid, excess salt, excess sodium.
621*: Nyala-----	Poorly suited-----	Too arid, soil blowing.
Breko-----	Poorly suited-----	Too arid.
Unsel-----	Poorly suited-----	Too arid.
630*: Molion-----	Poorly suited-----	Too arid, droughty, small stones.
Haarvar-----	Poorly suited-----	Too arid, droughty.
Haarvar-----	Poorly suited-----	Too arid, droughty.
631*: Roden-----	Poorly suited-----	Too arid, droughty, small stones.
Haarvar-----	Poorly suited-----	Too arid, droughty.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
632*:		
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
Haarvar-----	Poorly suited-----	Too arid, droughty.
633*:		
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
640*:		
Uwell-----	Suited-----	Too arid, excess salt.
Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
642*:		
Kunzler-----	Suited-----	Too arid.
Linoyer-----	Poorly suited-----	Too arid.
643*:		
Kunzler-----	Suited-----	Too arid.
Bylo-----	Poorly suited-----	Too arid, excess salt.
Zimwala-----	Poorly suited-----	Too arid, excess salt.
645*:		
Kunzler-----	Suited-----	Too arid.
Blimo-----	Suited-----	Too arid, excess salt.
Uwell-----	Suited-----	Too arid, excess salt.
650*:		
Eaglepass-----	Poorly suited-----	Too arid, droughty, small stones.
Kyler-----	Poorly suited-----	Too arid, droughty, small stones.
Rock outcrop-----	Not rated.	
660*:		
Stewval-----	Poorly suited-----	Too arid, droughty, small stones.
Rock outcrop-----	Not rated.	
670*:		
Cavehill-----	Poorly suited-----	Small stones.
Grink-----	Poorly suited-----	Droughty, small stones.
Rock outcrop-----	Not rated.	
680*:		
Genaw-----	Poorly suited-----	Droughty.
Puett-----	Poorly suited-----	Droughty.
Abgese-----	Suited-----	Too arid.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
690*: Devilsgait-----	Suited-----	Too arid, excess salt.
Cassiro-----	Poorly suited-----	Rooting depth.
710----- Raph	Poorly suited-----	Too arid.
730*: Zimwala-----	Poorly suited-----	Too arid, excess salt, soil blowing.
Uwell-----	Suited-----	Too arid, excess salt.
Zimwala-----	Poorly suited-----	Too arid, excess salt.
731*: Zimwala-----	Poorly suited-----	Too arid, excess salt, soil blowing.
Uwell-----	Suited-----	Too arid, excess salt.
740*: Orupa-----	Poorly suited-----	Excess salt.
Uwell-----	Suited-----	Too arid, excess salt.
741*: Orupa-----	Poorly suited-----	Excess salt.
Orupa-----	Poorly suited-----	Excess salt.
750*: Upatad-----	Poorly suited-----	Droughty, small stones.
Upatad-----	Poorly suited-----	Droughty, small stones.
Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
751*: Upatad-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
752*: Upatad-----	Poorly suited-----	Droughty, small stones.
Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
Pioche-----	Poorly suited-----	Droughty, small stones.
753*: Upatad-----	Poorly suited-----	Droughty, small stones.
Cropper-----	Poorly suited-----	Droughty, small stones.
Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
760*: Segura-----	Poorly suited-----	Droughty.
Upatad-----	Poorly suited-----	Droughty, small stones.
Cropper-----	Poorly suited-----	Droughty, small stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
762*:		
Segura-----	Poorly suited-----	Droughty.
Eoj-----	Poorly suited-----	Small stones, rooting depth.
Cassiro-----	Poorly suited-----	Rooting depth.
763*:		
Segura-----	Poorly suited-----	Droughty.
Pioche-----	Poorly suited-----	Droughty, small stones.
McIvey-----	Suited-----	Droughty.
770*:		
Cropper-----	Poorly suited-----	Droughty, small stones.
Birchcreek-----	Poorly suited-----	Small stones.
Segura-----	Poorly suited-----	Droughty.
774*:		
Cropper-----	Poorly suited-----	Droughty, small stones.
Cropper-----	Poorly suited-----	Droughty, small stones.
Rubble land-----	Poorly suited-----	Too arid, droughty, large stones.
780*:		
Bobs-----	Poorly suited-----	Droughty.
Orr-----	Suited-----	Too arid.
Urmafot-----	Poorly suited-----	Droughty, small stones.
783-----	Poorly suited-----	Droughty, small stones.
Bobs		
790*:		
Bylo-----	Poorly suited-----	Too arid, excess salt, soil blowing.
Tulase-----	Suited-----	Too arid.
793-----	Poorly suited-----	Too arid, excess salt, soil blowing.
Bylo		
800*:		
Broland-----	Poorly suited-----	Droughty, rooting depth.
Broland-----	Poorly suited-----	Droughty, rooting depth.
801-----	Poorly suited-----	Droughty, rooting depth.
Broland		
802*:		
Broland-----	Poorly suited-----	Droughty, rooting depth.
Yody-----	Suited-----	Too arid, excess salt.
803*:		
Broland-----	Poorly suited-----	Droughty, rooting depth.
Broyles-----	Poorly suited-----	Too arid, excess salt, excess sodium.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
810*: Yody-----	Suited-----	Too arid, excess salt
Fax-----	Poorly suited-----	Droughty, small stones.
822*: Pits-----	Not rated.	
Dumps-----	Poorly suited-----	Too arid, droughty, large stones.
823*----- Dumps	Poorly suited-----	Too arid, droughty, large stones.
830*: Genaw-----	Poorly suited-----	Droughty.
Tulase-----	Suited-----	Too arid.
842*: Orr-----	Suited-----	Too arid.
Fax-----	Poorly suited-----	Droughty, small stones.
850*: Onkeyo-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Adobe-----	Poorly suited-----	Droughty, small stones.
851*: Grink-----	Poorly suited-----	Droughty, small stones.
Onkeyo-----	Poorly suited-----	Droughty, small stones.
Xine-----	Poorly suited-----	Small stones.
852*: Grink-----	Poorly suited-----	Droughty, small stones.
Onkeyo-----	Poorly suited-----	Droughty, small stones.
Halacan-----	Poorly suited-----	Droughty, small stones.
870*: Amelar-----	Well suited.	
Eoj-----	Poorly suited-----	Small stones, rooting depth.
Amelar-----	Poorly suited-----	Small stones.
871*: Amelar-----	Well suited.	
Urmafot-----	Poorly suited-----	Droughty, small stones.
874*: Amelar-----	Poorly suited-----	Small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Tulase-----	Suited-----	Too arid.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
875*:		
Amelar-----	Suited-----	Erodes easily.
Eoj-----	Poorly suited-----	Small stones, rooting depth.
Hardol-----	Poorly suited-----	Small stones.
876*:		
Amelar-----	Suited-----	Erodes easily.
Xine-----	Poorly suited-----	Small stones.
Halacan-----	Poorly suited-----	Droughty, small stones.
880*:		
Wredah-----	Suited-----	Too arid, droughty.
Amelar-----	Poorly suited-----	Small stones.
Orr-----	Suited-----	Too arid.
900*:		
Abgese-----	Suited-----	Too arid.
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
Orr-----	Suited-----	Too arid.
902*:		
Abgese-----	Suited-----	Too arid.
Risley-----	Suited-----	Too arid, too clayey.
Roden-----	Poorly suited-----	Too arid, droughty, small stones.
911*:		
Devilsgait-----	Suited-----	Excess salt.
Duffer-----	Poorly suited-----	Excess salt.
Kunzler-----	Suited-----	Too arid.
913-----	Suited-----	Excess salt.
Devislgait		
920*:		
Abgese-----	Suited-----	Too arid.
Yody-----	Suited-----	Too arid, excess salt.
Shabliss-----	Poorly suited-----	Too arid, droughty.
930-----	Suited-----	Too arid, droughty.
Tosser		
940*:		
Nyak-----	Suited-----	Too arid.
Heist-----	Suited-----	Too arid, excess salt.
951*:		
Nyak-----	Suited-----	Too arid.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
951*: Uwell-----	Suited-----	Too arid, excess salt.
Pern-----	Suited-----	Too arid.
960*: Doten-----	Poorly suited-----	Excess salt, too crusty.
Bylo-----	Poorly suited-----	Too arid, excess salt.
Heist-----	Suited-----	Too arid, excess salt.
970*: Doten-----	Poorly suited-----	Excess salt, too crusty.
Doten-----	Poorly suited-----	Excess salt, too crusty.
981*: Breko-----	Poorly suited-----	Too arid, rooting depth.
Armespan-----	Poorly suited-----	Excess salt.
982*: Breko-----	Poorly suited-----	Too arid.
Yody-----	Suited-----	Too arid, excess salt.
990*: Blimo-----	Suited-----	Too arid, excess salt.
Kunzler-----	Suited-----	Too arid.
Pern-----	Suited-----	Too arid.
991*: Blimo-----	Suited-----	Too arid, excess salt.
Zerk-----	Poorly suited-----	Too arid.
992*: Blimo-----	Suited-----	Too arid, excess salt.
Linoyer-----	Poorly suited-----	Too arid.
Tulase-----	Suited-----	Too arid.
1000*: Linoyer-----	Poorly suited-----	Too arid, soil blowing.
Unsel-----	Poorly suited-----	Too arid.
1010*: Hunnton-----	Suited-----	Too arid, excess salt.
Chiara-----	Poorly suited-----	Excess sodium.
1012*: Hunnton-----	Suited-----	Too arid, excess salt.
Wieland-----	Poorly suited-----	Rooting depth.
Kelk-----	Poorly suited-----	Excess salt.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
1020*: Sonoma-----	Suited-----	Too arid, excess salt.
Kelk-----	Poorly suited-----	Excess salt.
1030----- Chiara	Poorly suited-----	Excess sodium.
1032*: Chiara-----	Poorly suited-----	Excess sodium.
Kelk-----	Poorly suited-----	Excess salt.
Kelk-----	Poorly suited-----	Excess salt.
1050*: Yody-----	Suited-----	Too arid, excess salt.
Dewar-----	Suited-----	Too arid, droughty, cemented pan.
1081*: Bobs-----	Poorly suited-----	Droughty.
Fax-----	Poorly suited-----	Droughty, small stones.
Parisa-----	Poorly suited-----	Droughty.
1090*: Fax-----	Poorly suited-----	Droughty, small stones.
Hunnton-----	Suited-----	Too arid, excess salt.
Cassiro-----	Poorly suited-----	Rooting depth.
1120*: Kunzler-----	Suited-----	Too arid.
Sycomat-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1122*: Kunzler-----	Suited-----	Too arid.
Pern-----	Suited-----	Too arid.
1130*: Duffer-----	Poorly suited-----	Excess salt.
Duffer-----	Poorly suited-----	Excess salt.
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
1131*: Duffer-----	Poorly suited-----	Excess salt.
Devilsgait-----	Well suited.	
Duffer-----	Poorly suited-----	Excess salt.
1132----- Duffer	Poorly suited-----	Excess salt.
1141*: Shabliss-----	Poorly suited-----	Too arid, droughty.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
1141*: Pyrat-----	Suited-----	Too arid, droughty, excess salt.
1151*: Zimbob-----	Poorly suited-----	Droughty, small stones.
Zimbob-----	Poorly suited-----	Droughty, small stones.
Rock outcrop-----	Not rated.	
1152*: Zimbob-----	Poorly suited-----	Droughty, small stones.
Zimbob-----	Poorly suited-----	Droughty, small stones, depth to rock.
Eaglepass-----	Poorly suited-----	Too arid, droughty, small stones.
1171*: Haunchee-----	Poorly suited-----	Droughty, small stones.
Hardol-----	Poorly suited-----	Small stones.
Halacan-----	Poorly suited-----	Droughty, small stones.
1173*: Haunchee-----	Poorly suited-----	Droughty, small stones.
Hardol-----	Poorly suited-----	Small stones.
Rock outcrop-----	Not rated.	
1174*: Haunchee-----	Poorly suited-----	Droughty, small stones.
Wardbay-----	Poorly suited-----	Small stones.
Hardzem-----	Poorly suited-----	Droughty, small stones.
1175*: Haunchee-----	Poorly suited-----	Droughty, small stones.
Hardol-----	Poorly suited-----	Small stones.
Hardzem-----	Poorly suited-----	Droughty, small stones.
1176*: Haunchee-----	Poorly suited-----	Droughty, small stones.
Hardzem-----	Poorly suited-----	Droughty, small stones.
Rock outcrop-----	Not rated.	
1178*: Haunchee-----	Poorly suited-----	Droughty, small stones.
Hardol-----	Poorly suited-----	Small stones.
Xine-----	Poorly suited-----	Small stones.
1180*: Eoj-----	Poorly suited-----	Small stones, rooting depth.
Eoj-----	Poorly suited-----	Small stones, rooting depth.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
1180*: McIvey-----	Suited-----	Droughty.
1190*: Katelana-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Boofuss-----	Poorly suited-----	Excess salt, excess sodium.
1201*: Biken-----	Poorly suited-----	Droughty, small stones.
Orr-----	Suited-----	Too arid.
1202*: Biken-----	Poorly suited-----	Droughty, small stones.
Biken-----	Poorly suited-----	Droughty, small stones.
Urmafot-----	Poorly suited-----	Droughty, small stones.
1221*: Cavehill-----	Poorly suited-----	Small stones.
Grink-----	Poorly suited-----	Droughty, small stones.
Onkeyo-----	Poorly suited-----	Droughty, small stones.
1222*: Grink-----	Poorly suited-----	Droughty.
Amelar-----	Well suited.	
Xine-----	Poorly suited-----	Small stones.
1230*: Garfan-----	Poorly suited-----	Small stones, rooting depth.
McIvey-----	Suited-----	Droughty.
Hutchley-----	Poorly suited-----	Droughty, small stones.
1240*: Biken-----	Poorly suited-----	Droughty, small stones.
Biken-----	Poorly suited-----	Droughty, small stones.
Biken-----	Poorly suited-----	Droughty, small stones.
1242*: Biken-----	Poorly suited-----	Droughty, small stones.
Palinor-----	Poorly suited-----	Droughty.
Barfan-----	Poorly suited-----	Too arid.
1243*: Biken-----	Poorly suited-----	Droughty, small stones.
Breko-----	Poorly suited-----	Too arid, rooting depth.
1245*: Biken-----	Poorly suited-----	Droughty, small stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
1245*: Biken-----	Poorly suited-----	Droughty, small stones.
Tulase-----	Suited-----	Too arid.
1251*: Alley-----	Poorly suited-----	Rooting depth.
Yody-----	Suited-----	Too arid, excess salt.
Cowgil-----	Poorly suited-----	Droughty, small stones.
1260*: Urmafot-----	Poorly suited-----	Droughty, small stones.
Urmafot-----	Poorly suited-----	Droughty.
1270*: Boofuss-----	Poorly suited-----	Excess salt, excess sodium.
Boofuss-----	Poorly suited-----	Excess salt, excess sodium.
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
1280*: Palinor-----	Poorly suited-----	Droughty.
Molion-----	Poorly suited-----	Too arid, droughty, small stones.
Broland-----	Poorly suited-----	Droughty, rooting depth.
1282*: Urmafot-----	Poorly suited-----	Droughty, small stones.
Urmafot-----	Poorly suited-----	Droughty.
Palinor-----	Poorly suited-----	Droughty.
1283*: Urmafot-----	Poorly suited-----	Droughty.
Fax-----	Poorly suited-----	Droughty, small stones.
1287*: Palinor-----	Poorly suited-----	Droughty.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Biken-----	Poorly suited-----	Droughty, small stones.
1288*: Urmafot-----	Poorly suited-----	Droughty.
Cavehill-----	Poorly suited-----	Small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
1291*: Maderbak-----	Poorly suited-----	Small stones.
McIvey-----	Poorly suited-----	Small stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
1300*:		
Barfan-----	Poorly suited-----	Too arid.
Tulase-----	Suited-----	Too arid.
1310*:		
Kunzler-----	Suited-----	Too arid.
Duffer-----	Poorly suited-----	Excess salt.
Kunzler-----	Suited-----	Too arid.
1321-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Syccomat		
1330*:		
Yody-----	Suited-----	Too arid, excess salt.
Dewar-----	Suited-----	Too arid, droughty, cemented pan.
1340*:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Tulase-----	Suited-----	Too arid.
1351*:		
Hyzen-----	Poorly suited-----	Droughty, large stones.
Kyler-----	Poorly suited-----	Too arid, droughty, small stones.
Rock outcrop-----	Not rated.	
1360*:		
Eganroc-----	Poorly suited-----	Droughty, small stones.
Hyzen-----	Poorly suited-----	Droughty, large stones.
Hardzem-----	Poorly suited-----	Droughty, small stones.
1370*:		
Wardbay-----	Poorly suited-----	Small stones.
Haunchee-----	Poorly suited-----	Droughty, small stones.
Hardol-----	Poorly suited-----	Small stones.
1372*:		
Wardbay-----	Poorly suited-----	Small stones.
Hardol-----	Poorly suited-----	Small stones.
Adobe-----	Poorly suited-----	Droughty, small stones.
1374*:		
Wardbay-----	Poorly suited-----	Small stones.
Adobe-----	Poorly suited-----	Droughty, small stones.
Haunchee-----	Poorly suited-----	Droughty, small stones.
1380*:		
Cavehill-----	Poorly suited-----	Small stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
1380*: Hardol-----	Poorly suited-----	Small stones.
Eganroc-----	Poorly suited-----	Droughty, small stones.
1383*: Cavehill-----	Poorly suited-----	Small stones.
Cavehill-----	Poorly suited-----	Droughty, small stones.
Rock outcrop-----	Not rated.	
1384*: Cavehill-----	Poorly suited-----	Small stones.
Haunchee-----	Poorly suited-----	Droughty, small stones.
Cavehill-----	Poorly suited-----	Droughty, small stones.
1385*: Cavehill-----	Poorly suited-----	Small stones.
Hyzen-----	Poorly suited-----	Droughty, large stones.
Xine-----	Poorly suited-----	Small stones.
1390*: Chen-----	Poorly suited-----	Droughty, small stones, rooting depth.
Segura-----	Poorly suited-----	Droughty.
McIvey-----	Suited-----	Droughty.
1391*: Chen-----	Poorly suited-----	Droughty, small stones, rooting depth.
Tusel-----	Well suited.	
1392*: Chen-----	Poorly suited-----	Droughty, small stones, rooting depth.
McIvey-----	Suited-----	Droughty.
Birchcreek-----	Poorly suited-----	Small stones, rooting depth.
1400*: Suak-----	Poorly suited-----	Droughty, small stones.
Segura-----	Poorly suited-----	Droughty.
McIvey-----	Poorly suited-----	Small stones.
1430*: Hardzem-----	Poorly suited-----	Droughty, small stones, erodes easily.
Haunchee-----	Poorly suited-----	Droughty, small stones.
Wardbay-----	Poorly suited-----	Small stones.
1431*: Hardzem-----	Poorly suited-----	Droughty, small stones, erodes easily.
Hackwood-----	Poorly suited-----	Large stones.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
1431*: Guiser-----	Poorly suited-----	Small stones.
1451*: Birchcreek-----	Poorly suited-----	Small stones.
Segura-----	Poorly suited-----	Droughty.
Chen-----	Poorly suited-----	Droughty, small stones, rooting depth.
1460----- Unsel	Poorly suited-----	Too arid, soil blowing.
1480*: Amelar-----	Poorly suited-----	Small stones.
Bobs-----	Poorly suited-----	Droughty.
1491*: Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Palinor-----	Poorly suited-----	Droughty.
Tulase-----	Suited-----	Too arid.
1492*: Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Shabliss-----	Poorly suited-----	Too arid, droughty.
Linoyer-----	Poorly suited-----	Too arid.
1493*: Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Parisa-----	Poorly suited-----	Droughty.
Tulase-----	Suited-----	Too arid.
1494*: Pyrat-----	Suited-----	Too arid, droughty, excess salt.
McConnel-----	Poorly suited-----	Excess salt.
1510*: Raph-----	Poorly suited-----	Too arid.
Zimwala-----	Poorly suited-----	Too arid, excess salt.
Heist-----	Suited-----	Too arid, excess salt.
1511*: Hessing-----	Poorly suited-----	Too arid, excess salt.
Uwell-----	Suited-----	Too arid, excess salt.
Zimwala-----	Poorly suited-----	Too arid, excess salt.
1520*: Fax-----	Poorly suited-----	Droughty, small stones.
Yody-----	Suited-----	Too arid, excess salt.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
1520*: Broland-----	Poorly suited-----	Droughty, rooting depth.
1550*: Haunchee-----	Poorly suited-----	Droughty, small stones.
Muiral-----	Suited-----	Droughty.
Wardbay-----	Poorly suited-----	Small stones.
1560*: Adobe-----	Poorly suited-----	Droughty, small stones.
Haunchee-----	Poorly suited-----	Droughty, small stones.
Hardzem-----	Poorly suited-----	Droughty, small stones.
1570*: Nyala-----	Poorly suited-----	Too arid, soil blowing.
Broyles-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1580*: Wredah-----	Suited-----	Too arid, droughty.
Selti-----	Poorly suited-----	Small stones.
Tulase-----	Suited-----	Too arid.
1610*: Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Blimo-----	Suited-----	Too arid, excess salt.
1700*: Garfan-----	Poorly suited-----	Small stones, rooting depth.
Garfan-----	Poorly suited-----	Small stones, rooting depth.
McIvey-----	Poorly suited-----	Small stones.
1800*: Pookaloo-----	Poorly suited-----	Droughty, small stones.
Onkeyo-----	Poorly suited-----	Droughty, small stones.
Cavehill-----	Poorly suited-----	Small stones.
1810*: Ilton-----	Suited-----	Too arid, droughty.
Yody-----	Suited-----	Too arid, excess salt.
Blimo-----	Suited-----	Too arid, excess salt.
1820*: Sodhouse-----	Poorly suited-----	Too arid, droughty.
Sodhouse-----	Poorly suited-----	Too arid, droughty.
1821*: Sodhouse-----	Poorly suited-----	Too arid, droughty.

See footnote at end of table.

TABLE 5.--RANGELAND SEEDING--Continued

Soil name and map symbol	Suitability	Restrictive features
1821*: Palinor-----	Poorly suited-----	Droughty.
1830*: Armespan-----	Poorly suited-----	Excess salt.
Cliffdown-----	Poorly suited-----	Too arid, droughty, small stones.
Candelaria-----	Poorly suited-----	Too arid, droughty, too sandy.
1850*: Clanalpine-----	Poorly suited-----	Small stones.
Rubble land-----	Poorly suited-----	Too arid, droughty, large stones.
Rock outcrop-----	Not rated.	
1860*: Hackwood-----	Poorly suited-----	Large stones.
Chen-----	Poorly suited-----	Droughty, small stones, rooting depth.
Tusel-----	Well suited.	

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY

(Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available)

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Common trees	Site index	Productivity class*
100**: Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Rock outcrop.								
104**: Pookaloo-----	OD	Moderate	Moderate	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Zimbob.								
Hyzen.								
108**: Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Tecomar.								
Rock outcrop.								
109**: Hyzen-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Hyzen.								
113**: Zimbob.								
Zimbob.								
Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
120**: Tecomar.								
Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Zimbob.								
124**: Tecomar.								
Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0

See footnotes at end of table.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Common trees	Site index	Productivity class*
124**: Tecomar.								
126**: Tecomar.								
Xine.								
Pookaloo-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	20	0
						Utah juniper-----	20	0
201**: Hyzen.								
Pookaloo-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	20	0
						Utah juniper-----	20	0
Tecomar.								
205**: Hyzen.								
Hardzem-----	5R	Severe	Severe	Severe	Moderate	White fir-----	41	5
Rock outcrop.								
223**: Hutchley.								
McIvey.								
Pookaloo-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	20	0
						Utah juniper-----	20	0
291**: Urmafot.								
Borvant-----	0X	Slight	Moderate	Moderate	Slight	Singleleaf pinyon---	20	0
						Utah juniper-----	20	0
Biken.								
292**: Palinor.								
Urmafot.								
Urmafot-----	0D	Slight	Slight	Moderate	Slight	Singleleaf pinyon---	25	0
						Utah juniper-----	25	0
295**: Palinor.								
Roden.								
Roden-----	0D	Moderate	Moderate	Moderate	Slight	Utah juniper-----	15	0
322**: Palinor.								

See footnotes at end of table.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Common trees	Site index	Productivity class*
322**: Roden----- Urmafot.	0D	Moderate	Moderate	Moderate	Slight	Utah juniper-----	15	0
326**: Palinor.								
Urmafot-----	0D	Slight	Slight	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	25 25	0 0
Roden-----	0D	Slight	Slight	Moderate	Slight	Utah juniper-----	15	0
327**: Urmafot.								
Cassiro.								
Biken-----	0D	Moderate	Moderate	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
328**: Urmafot.								
Tecomar.								
Pookaloo-----	0D	Moderate	Moderate	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
434**: Pookaloo-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Hyzen-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Hyzen.								
436**: Pookaloo-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Hyzen-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Cavehill-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
437**: Pookaloo-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Urmafot.								
Tulase.								
480**: Ploche-----	0R	Moderate	Severe	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0

See footnotes at end of table.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Common trees	Site index	Productivity class*
480**: Cropper-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	35	0
481**: Pioche-----	0X	Moderate	Moderate	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0
Segura. Cropper-----	0X	Moderate	Moderate	Moderate	Slight	Singleleaf pinyon---	35	0
483**: Pioche-----	0R	Moderate	Severe	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0
Upatad. Birchcreek.								
484**: Pioche-----	0R	Moderate	Severe	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0
Birchcreek. Cropper-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	35	0
486**: Pioche-----	0R	Moderate	Severe	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0
Cropper-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	35	0
Upatad.								
489**: Pioche-----	0R	Moderate	Severe	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0
McIvey. Birchcreek.								
510**: Onkeyo.								
Cavehill-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Pookaloo-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
520**: McIvey.								
Pioche-----	0R	Moderate	Severe	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0
561**: McIvey.								

See footnotes at end of table.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Common trees	Site index	Productivity class*
561**: Pioche-----	OR	Moderate	Severe	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0
Upatad.								
566**: McIvey.								
Segura.								
Cropper-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	35	0
633**: Roden.								
Izar.								
Roden-----	OD	Moderate	Moderate	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
670**: Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Grink.								
Rock outcrop.								
680**: Genaw.								
Puett-----	OD	Moderate	Moderate	Moderate	Slight	Utah juniper-----	20	0
Abgese.								
750**: Upatad.								
Upatad-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Atlow.								
751**: Upatad.								
Pookaloo-----	OD	Moderate	Moderate	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
752**: Upatad.								
Atlow.								
Pioche-----	OR	Moderate	Severe	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0
753**: Upatad.								

See footnotes at end of table.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Common trees	Site index	Productivity class*
753**: Cropper----- Atlow.	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	35	0
760**: Segura. Upataad.								
Cropper-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	35	0
763**: Segura. Pioche-----	0R	Moderate	Severe	Moderate	Slight	Utah juniper----- Singleleaf pinyon---	20 20	0 0
McIvey.								
770**: Cropper----- Birchcreek. Segura.	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	35	0
774**: Cropper----- Cropper----- Rubble land.	0R 0R	Severe Severe	Severe Severe	Moderate Moderate	Slight Slight	Singleleaf pinyon--- Singleleaf pinyon---	20 35	0 0
850**: Onkeyo. Pookaloo-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Adobe.								
874**: Amelar. Pookaloo-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Tulase.								
902**: Abgese. Risley. Roden-----	0D	Slight	Slight	Moderate	Slight	Utah juniper-----	15	0
1174**: Haunchee.								

See footnotes at end of table.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Common trees	Site index	Productivity class*
1174**: Wardbay.								
Hardzem-----	5R	Severe	Severe	Severe	Moderate	White fir-----	41	5
1175**: Haunchee.								
Hardol.								
Hardzem-----	5R	Severe	Severe	Severe	Moderate	White fir-----	41	5
1176**: Haunchee.								
Hardzem-----	5R	Severe	Severe	Severe	Moderate	White fir-----	41	5
Rock outcrop.								
1201**: Biken-----	0D	Moderate	Moderate	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Orr.								
1202**: Biken-----	0D	Moderate	Moderate	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Biken.								
Urmafot.								
1221**: Cavehill-----	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	60	0
Grink.								
Onkeyo.								
1240**: Biken.								
Biken.								
Biken-----	0D	Moderate	Moderate	Moderate	Slight	Utah juniper-----	15	0
1245**: Biken.								
Biken-----	0D	Moderate	Moderate	Moderate	Slight	Utah juniper-----	15	0
Tulase.								
1260**: Urmafot.								
Urmafot-----	0D	Slight	Slight	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	25 25	0 0

See footnotes at end of table.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Common trees	Site index	Productivity class*
1287**: Palinor. Izar. Biken-----	OD	Moderate	Moderate	Moderate	Slight	Utah juniper-----	15	0
1288**: Urmafot-----	OD	Slight	Slight	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	25 25	0 0
Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
1351**: Hyzen-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Kyler. Rock outcrop.								
1360**: Eganroc-----	4R	Severe	Severe	Moderate	Slight	White fir-----	30	4
Hyzen. Hardzem-----	5R	Severe	Severe	Severe	Moderate	White fir-----	41	5
1380**: Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	60	0
Hardol. Eganroc-----	4R	Severe	Severe	Moderate	Slight	White fir-----	30	4
1383**: Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	60	0
Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	35	0
Rock outcrop.								
1384**: Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	60	0
Haunchee. Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	35	0
1385**: Cavehill-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	60	0
Hyzen-----	OR	Severe	Severe	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	20 20	0 0
Xine.								

See footnotes at end of table.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity		
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Common trees	Site index	Productivity class*
1430**: Hardzem----- Haunchee. Wardbay.	5R	Severe	Severe	Severe	Moderate	White fir-----	41	5
1431**: Hardzem----- Hackwood----- Guiser-----	5R 1R 4R	Severe Severe Severe	Severe Severe Severe	Severe Slight Moderate	Moderate Severe Moderate	White fir----- Quaking aspen----- White fir----- Quaking aspen----- Bristlecone pine----	41 45 40 45 ---	5 1 4 1 ---
1550**: Haunchee. Muiral----- Wardbay.	6R	Severe	Severe	Moderate	Moderate	Engelmann spruce---	84	6
1560**: Adobe. Haunchee. Hardzem-----	5R	Severe	Severe	Severe	Moderate	White fir-----	41	5
1800**: Pookaloo----- Onkeyo. Cavehill-----	0R 0R	Severe Severe	Severe Severe	Moderate Moderate	Slight Slight	Singleleaf pinyon--- Utah juniper----- Singleleaf pinyon--- Utah juniper-----	20 20 20 20	0 0 0 0
1810**: Ilton----- Yody. Blimo.	0A	Moderate	Moderate	Moderate	Slight	Singleleaf pinyon--- Utah juniper-----	25 25	0 0
1850**: Clan Alpine----- Rubble land. Rock outcrop.	0R	Severe	Severe	Moderate	Slight	Singleleaf pinyon---	75	1

See footnotes at end of table.

TABLE 6.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordi- nation symbol	Management concerns				Potential productivity		
		Erosion hazard	Equip- ment limita- tion	Seedling mortal- ity	Wind- throw hazard	Common trees	Site index	Produc- tivity class*
1860**: Hackwood----- Chen. Tusel.	1A	Moderate	Moderate	Slight	Moderate	Quaking aspen-----	45	1

* Productivity class is the yield in cubic meters per hectare per year calculated at the age of culmination of mean annual increment for fully stocked natural stands.

** See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
100*: Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Rock outcrop.						
104*: Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
108*: Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Tecomar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Rock outcrop.						
109*: Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
110*: Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
110*: Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
111*: Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hyzen----- Rock outcrop.	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
113*: Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
119*: Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Palinor-----	Severe: cemented pan, cutbanks cave, slope.	Severe: cemented pan, slope.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
120*: Tecomar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
124*: Tecomar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
124*: Tecomar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
126*: Tecomar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Xine-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
160*: Zerk-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
Heist-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Tosser-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
162*: Broyles-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
166*: Tosser-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Linoyer-----	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
170*: Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Hessing-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage, excess salt.
Zerk-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
173*: Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
174*: Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
179*: Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Pern-----	Slight-----	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: piping.
181*: Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Cowgil-----	Severe: cutbanks cave.	Moderate: frost action, large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
Broyles-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
185*: Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
189*: Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Linoyer-----	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
190*: Cowgil-----	Severe: cutbanks cave.	Moderate: slope, frost action, large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
190*: Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Fax-----	Severe: cemented pan.	Moderate: cemented pan, slope, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
192*: Cowgil-----	Severe: cutbanks cave.	Moderate: frost action, large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
201*: Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Tecomar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
205*: Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Hardzem-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Rock outcrop.						
220*: Hutchley-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: thin layer.
McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Suak-----	Severe: depth to rock, large stones, slope.	Severe: slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
223*: Hutchley-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
223*: McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
224*: Hutchley-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: thin layer.
McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
226*: Hutchley-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: thin layer.
Tusel-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Suak-----	Severe: depth to rock, large stones, slope.	Severe: slope, large stones.	Poor: depth to rock, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
230*: Linoyer-----	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
231----- Linoyer	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
232*: Linoyer-----	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
233----- Linoyer	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: small stones.	Probable-----	Severe: piping.
241*: Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
241*: Raph-----	Severe: cutbanks cave.	Moderate: shrink-swell, low strength, flooding.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, piping.
242*: Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
243*: Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Heist-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Myak-----	Slight-----	Moderate: shrink-swell, flooding, frost action.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
244*: Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Raph-----	Severe: cutbanks cave.	Moderate: shrink-swell, low strength, flooding.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, piping.
246*: Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
250*: Sheffit-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
252*: Sheffit-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
252*: Equis-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, excess sodium.
Equis-----	Severe: wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, wetness, excess sodium.
253*: Sheffit-----	Moderate: too clayey.	Severe: shrink-swell, low strength, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: hard to pack, excess salt.
Sheffit-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Zorravista-----	Severe: cutbanks cave.	Slight-----	Fair: thin layer.	Probable-----	Improbable: too sandy.	Severe: seepage, piping.
254*: Sheffit-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Boofuss-----	Moderate: wetness.	Severe: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess sodium, excess salt.
255*: Sheffit-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Sheffit-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
262----- Equis	Severe: wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, wetness, excess sodium.
266*: Equis-----	Severe: wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, wetness, excess sodium.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
266*: Equis-----	Severe: wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, wetness, excess sodium.
Kolda-----	Severe: wetness.	Severe: shrink-swell, low strength, wetness.	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness.
267*: Equis-----	Severe: wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, wetness, excess sodium.
Devilsgait-----	Severe: cutbanks cave, wetness.	Severe: low strength, wetness, flooding.	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness.
270*: Atlow-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Maderbak-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Rubble land-----	Severe: large stones, slope.	Severe: slope, large stones.	Poor: large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Severe: seepage, large stones.
271*: Atlow-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Atlow-----	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
275*: Atlow-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Atlow-----	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Upatad-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
276*: Stewval-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
276*: Maderbak-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Atlow-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
279*: Atlow-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Broland-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, slope, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
282----- Palinor	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
283*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
286*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
287*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Wintermute-----	Severe: cutbanks cave.	Moderate: large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
288*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
288*: Broland-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
290*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
291*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Borvant-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Biken-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
292*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
295*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Roden-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Roden-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
296*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
296*: Palinor-----	Severe: cemented pan, cutbanks cave, slope.	Severe: cemented pan, slope.	Poor: cemented pan, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
297*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Amelar-----	Moderate: slope.	Moderate: slope, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Izar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
300*: Playas-----	Severe: ponding.	Severe: low strength, ponding, flooding.	Poor: low strength, wetness, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, ponding, excess salt.
Orupa-----	Moderate: too clayey, slope.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: hard to pack.
310*: Dune land-----	Severe: cutbanks cave.	Moderate: slope.	Good-----	Probable-----	Improbable: too sandy.	Severe: seepage, piping.
Playas-----	Severe: ponding.	Severe: low strength, ponding.	Poor: low strength, wetness, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, ponding, excess salt.
321*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Palinor-----	Severe: cemented pan, cutbanks cave, slope.	Severe: cemented pan, slope.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
322*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Roden-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Urmafot-----	Severe: cemented pan, slope.	Severe: cemented pan, slope.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
323*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Bobs-----	Severe: cemented pan, slope.	Severe: cemented pan, slope.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
326*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Roden-----	Severe: depth to rock.	Moderate: depth to rock, shrink-swell, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
327*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Cassiro-----	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Biken-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
328*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Tecomar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
334*: Parisa-----	Severe: cemented pan.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
336----- Parisa	Severe: cemented pan.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
337*: Parisa-----	Severe: cemented pan.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Wintermute-----	Severe: cutbanks cave.	Moderate: large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
338*: Parisa-----	Severe: cemented pan.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
340*: Izar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Izar-----	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
346*: Izar-----	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Roden-----	Severe: depth to rock.	Moderate: depth to rock, shrink-swell.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Zerk-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
351*: Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
353----- Heist	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
356*: Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Wintermute-----	Severe: cutbanks cave.	Moderate: large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
360*: Belmill-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
Belmill-----	Severe: cutbanks cave.	Moderate: slope, frost action.	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
361*: Belmill-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
Cowgil-----	Severe: cutbanks cave.	Moderate: frost action, large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
Selti-----	Severe: cutbanks cave, large stones.	Severe: large stones.	Poor: large stones.	Improbable: large stones.	Improbable: large stones.	Severe: seepage, large stones.
372----- Automal	Severe: cutbanks cave.	Moderate: frost action, large stones.	Fair: large stones.	Improbable: small stones.	Probable-----	Severe: seepage.
373*: Automal-----	Severe: cutbanks cave.	Moderate: frost action, large stones.	Fair: large stones.	Improbable: small stones.	Probable-----	Severe: seepage.
Wintermute-----	Severe: cutbanks cave.	Moderate: large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
380*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Parisa-----	Severe: cemented pan.	Moderate: cemented pan, slope, frost action.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
411*: Cassiro-----	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Cassiro-----	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
413*: Cassiro-----	Moderate: too clayey.	Moderate: shrink-swell.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Fax-----	Severe: cemented pan.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Belmill-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
414*: Cassiro-----	Moderate: too clayey.	Moderate: shrink-swell.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Belmill-----	Severe: cutbanks cave.	Moderate: slope, frost action.	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
421----- Wintermute	Severe: cutbanks cave.	Moderate: large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
425*: Wintermute-----	Severe: cutbanks cave.	Moderate: large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
Wintermute-----	Severe: cutbanks cave.	Moderate: large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
434*: Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
436*: Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
437*: Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Urmafot-----	Severe: cemented pan, slope.	Severe: cemented pan, slope.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
440*: Hessing-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage, excess salt.
Zerk-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
450*: Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
455*: Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Linoyer-----	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
458*: Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
471*: Hessing-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage, excess salt.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
472*: Broyles-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
473*: Broyles-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Sheffit-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
473*: Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
480*: Pioche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
481*: Pioche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
483*: Pioche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Upatad-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Birchcreek-----	Severe: depth to rock, large stones, slope.	Severe: shrink-swell, slope, large stones.	Poor: depth to rock, shrink-swell, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
484*: Pioche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Birchcreek-----	Severe: depth to rock, large stones, slope.	Severe: shrink-swell, slope, large stones.	Poor: depth to rock, shrink-swell, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
486*: Pioche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
486*: Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Upata-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
489*: Ploche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Birchcreek-----	Severe: depth to rock, large stones, slope.	Severe: shrink-swell, slope, large stones.	Poor: depth to rock, shrink-swell, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
490----- Kunzler	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
491*: Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
500*: Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Hutchley-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: thin layer.
510*: Onkeyo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
520*: McIvey-----	Severe: slope.	Severe: slope.	Fair: shrink-swell, large stones, slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Pioche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
531*: Duffer-----	Moderate: wetness.	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
534*: Duffer-----	Moderate: wetness.	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Duffer-----	Severe: wetness.	Severe: low strength, flooding, frost action.	Fair: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness, excess salt.
Kolda-----	Severe: wetness.	Severe: shrink-swell, low strength, wetness.	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness.
540*: Kolda-----	Severe: wetness.	Severe: shrink-swell, low strength, wetness.	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness.
Sheffit-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Equis-----	Severe: wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, wetness, excess sodium.
541*: Kolda-----	Severe: wetness.	Severe: shrink-swell, low strength, wetness.	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness.
Duffer-----	Severe: wetness.	Severe: low strength, flooding, frost action.	Fair: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness, excess salt.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
542*: Devilsgait-----	Severe: cutbanks cave, wetness.	Severe: low strength, wetness, flooding.	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness.
Devilsgait-----	Severe: cutbanks cave, wetness.	Severe: low strength, wetness, flooding.	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness.
Duffer-----	Severe: wetness.	Severe: low strength, flooding, frost action.	Fair: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness, excess salt.
550*: Molion-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Unsel-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
Breko-----	Severe: cutbanks cave.	Moderate: shrink-swell, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
552----- Molion	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
561*: McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Pioche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Upatad-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
564*: McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Chen-----	Severe: depth to rock.	Severe: depth to rock, slope.	Poor: depth to rock, large stones, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Suak-----	Severe: depth to rock, large stones, slope.	Severe: slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
566*: McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
566*: Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
567*: McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Birchcreek-----	Severe: depth to rock, large stones, slope.	Severe: shrink-swell, slope, large stones.	Poor: depth to rock, shrink-swell, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Hutchley-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: thin layer.
570*: Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
McConnel-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: thin layer.	Improbable: thin layer.	Severe: seepage, excess salt.
573*: Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
575*: Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Broyles-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
578----- Yody	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
580*: Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Kelk-----	Slight-----	Severe: low strength.	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
590*: Raph-----	Severe: cutbanks cave.	Moderate: shrink-swell, low strength, flooding.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, piping.
Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Zimwala-----	Moderate: too clayey.	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
602*: Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Nyak-----	Slight-----	Moderate: shrink-swell, flooding, frost action.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Raph-----	Severe: cutbanks cave.	Moderate: shrink-swell, low strength, flooding.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, piping.
603*: Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
605*: Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Tosser-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
610*: Broyles-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
610*: Unsel-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
620*: Unsel-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
Broyles-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
621*: Nyala-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Breko-----	Severe: cutbanks cave.	Moderate: shrink-swell, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Unsel-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
630*: Molion-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, slope, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Haarvar-----	Severe: depth to rock.	Severe: shrink-swell, low strength.	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Haarvar-----	Severe: depth to rock, slope.	Severe: shrink-swell, low strength, slope.	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
631*: Roden-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Haarvar-----	Severe: depth to rock, slope.	Severe: shrink-swell, low strength, slope.	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
632*: Roden-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Haarvar-----	Severe: depth to rock, slope.	Severe: shrink-swell, low strength, slope.	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
633*: Roden-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Izar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Roden-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
640*: Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
642*: Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
Linoyer-----	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
643*: Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
Bylo-----	Slight-----	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: piping.
Zimwala-----	Moderate: too clayey.	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
645*: Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
650*: Eaglepass-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Kyler-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
650*: Rock outcrop.						
660*: Stewval----- Rock outcrop.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
670*: Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Grink----- Rock outcrop.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
680*: Genaw-----	Severe: depth to rock.	Moderate: depth to rock, frost action.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Puett-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage, piping.
Abgese-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
690*: Devilsgait-----	Severe: cutbanks cave.	Severe: low strength, frost action.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, piping.
Cassiro-----	Moderate: too clayey.	Moderate: shrink-swell.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
710----- Raph	Severe: cutbanks cave.	Moderate: shrink-swell, low strength, flooding.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, piping.
730*: Zimwala-----	Moderate: too clayey.	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Zimwala-----	Moderate: too clayey.	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
731*: Zimwala-----	Moderate: too clayey.	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
731*: Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
740*: Orupa-----	Moderate: too clayey.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: hard to pack.
Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
741*: Orupa-----	Moderate: too clayey.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: hard to pack.
Orupa-----	Moderate: too clayey.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: hard to pack.
750*: Upatad-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Upatad-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Atlow-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
751*: Upatad-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
752*: Upatad-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Atlow-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Pioche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
753*: Upatad-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Atlow-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
760*: Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Upatad-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
762*: Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Eoj-----	Severe: slope.	Severe: shrink-swell, low strength, slope.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Cassiro-----	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
763*: Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Pioche-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
McIvey-----	Moderate: too clayey, large stones, slope.	Moderate: shrink-swell, slope, frost action.	Fair: shrink-swell, large stones.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
770*: Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
770*: Birchcreek-----	Severe: depth to rock, large stones, slope.	Severe: shrink-swell, slope, large stones.	Poor: depth to rock, shrink-swell, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
774*: Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Cropper-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Rubble land-----	Severe: large stones, slope.	Severe: slope, large stones.	Poor: large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Severe: seepage, large stones.
780*: Bobs-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Orr-----	Moderate: slope.	Moderate: shrink-swell, slope, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Slight.
Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
783----- Bobs	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
790*: Bylo-----	Slight-----	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: piping.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
793----- Bylo	Slight-----	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: piping.
800*: Broland-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Broland-----	Severe: cemented pan, cutbanks cave, slope.	Severe: cemented pan, slope.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
801----- Broland	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
802*: Broland-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
803*: Broland-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Broyles-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
810*: Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, slope, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Fax-----	Severe: cemented pan.	Moderate: cemented pan, slope, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
822*: Pits.						
Dumps-----	Severe: large stones, slope.	Severe: slope, large stones.	Poor: large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Severe: seepage, large stones.
823*: Dumps	Severe: large stones.	Severe: large stones.	Poor: large stones.	Improbable: small stones, large stones.	Improbable: large stones.	Severe: seepage, large stones.
830*: Genaw-----	Severe: depth to rock.	Moderate: depth to rock, frost action.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
842*: Orr-----	Slight-----	Moderate: shrink-swell, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Slight.
Fax-----	Severe: cemented pan.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
850*: Onkeyo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
850*: Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Adobe-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
851*: Grink-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Onkeyo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Xine-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
852*: Grink-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Onkeyo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Halacan-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
870*: Amelar-----	Moderate: slope.	Moderate: slope, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Eoj-----	Moderate: too clayey, large stones, slope.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Amelar-----	Moderate: slope.	Moderate: slope, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
871*: Amelar-----	Severe: slope.	Severe: slope.	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
874*: Amelar-----	Severe: slope.	Severe: slope.	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
874*:						
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
875*:						
Amelar-----	Severe: slope.	Severe: slope.	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Eoj-----	Severe: slope.	Severe: shrink-swell, low strength, slope.	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Hardol-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: small stones.	Probable-----	Severe: seepage, large stones.
876*:						
Amelar-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Xine-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Halacan-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
880*:						
Wredah-----	Moderate: slope.	Moderate: slope, frost action.	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
Amelar-----	Moderate: slope.	Moderate: slope, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Orr-----	Slight-----	Moderate: shrink-swell, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Slight.
900*:						
Abgese-----	Severe: cutbanks cave.	Moderate: slope, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Roden-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Orr-----	Moderate: slope.	Moderate: shrink-swell, slope, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Slight.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
902*: Abgese-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Risley-----	Moderate: depth to rock, too clayey.	Severe: shrink-swell, low strength.	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Roden-----	Severe: depth to rock.	Moderate: depth to rock, shrink-swell, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
911*: Devilsgait-----	Severe: cutbanks cave.	Severe: low strength, flooding, frost action.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, piping.
Duffer-----	Moderate: wetness.	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
913----- Devilsgait	Severe: cutbanks cave.	Severe: low strength, flooding, frost action.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, piping.
920*: Abgese-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
930----- Tosser	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
940*: Nyak-----	Slight-----	Moderate: shrink-swell, flooding, frost action.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Heist-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
951*: Nyak-----	Slight-----	Moderate: shrink-swell, flooding, frost action.	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
951*: Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Pern-----	Slight-----	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: piping.
960*: Doten-----	Severe: cutbanks cave.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Bylo-----	Slight-----	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: piping.
Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
970*: Doten-----	Severe: cutbanks cave.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Doten-----	Severe: cutbanks cave.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
981*: Breko-----	Severe: cutbanks cave.	Moderate: shrink-swell, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Armespan-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
982*: Breko-----	Severe: cutbanks cave.	Moderate: shrink-swell, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
990*: Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
Pern-----	Slight-----	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: piping.
991*: Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
991*: Zerk-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
992*: Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Linoyer-----	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1000*: Linoyer-----	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Unsel-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
1010*: Hunnton-----	Severe: cemented pan.	Severe: shrink-swell, low strength.	Poor: cemented pan, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, hard to pack.
Chiara-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1012*: Hunnton-----	Severe: cemented pan.	Severe: shrink-swell, low strength.	Poor: cemented pan, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, hard to pack
Wieland-----	Moderate: too clayey, slope.	Severe: shrink-swell, low strength.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer.
Kelk-----	Slight-----	Severe: low strength.	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1020*: Sonoma-----	Slight-----	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: piping.
Kelk-----	Slight-----	Severe: low strength.	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1030----- Chiara	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1032*: Chiara-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1032*: Kelk-----	Slight-----	Severe: low strength.	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Kelk-----	Slight-----	Severe: low strength.	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1050*: Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Dewar-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1081*: Bobs-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Fax-----	Severe: cemented pan.	Moderate: cemented pan, slope, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Parisa-----	Severe: cemented pan.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
1090*: Fax-----	Severe: cemented pan, slope.	Severe: slope.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Hunnton-----	Severe: cemented pan.	Severe: shrink-swell, low strength.	Poor: cemented pan, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, hard to pack.
Cassiro-----	Severe: slope.	Severe: slope.	Fair: shrink-swell, slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
1120*: Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
Sycomat-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1122*: Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
Pern-----	Slight-----	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Moderate: piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1130*: Duffer-----	Severe: wetness.	Severe: low strength, flooding, frost action.	Fair: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness, excess salt.
Duffer-----	Moderate: wetness.	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Equis-----	Severe: wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, wetness, excess sodium.
1131*: Duffer-----	Severe: wetness.	Severe: low strength, flooding, frost action.	Fair: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness, excess salt.
Devilsgait-----	Severe: cutbanks cave, wetness.	Severe: low strength, wetness, flooding.	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: wetness.
Duffer-----	Moderate: wetness.	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
1132----- Duffer	Moderate: wetness.	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
1141*: Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
1151*: Zimbob-----	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Rock outcrop.						
1152*: Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Zimbob-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1152*: Eaglepass-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
1171*: Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hardol-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: small stones.	Probable-----	Severe: seepage, large stones.
Halacan-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
1173*: Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hardol-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: small stones.	Probable-----	Severe: seepage, large stones.
Rock outcrop.						
1174*: Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Wardbay-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage, large stones.
Hardzem-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
1175*: Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hardol-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: small stones.	Probable-----	Severe: seepage, large stones.
Hardzem-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
1176*: Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1176*: Hardzem-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Rock outcrop.						
1178*: Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hardol-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: small stones.	Probable-----	Severe: seepage, large stones.
Xine-----	Severe: slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
1180*: Eoj-----	Severe: slope.	Severe: shrink-swell, low strength, slope.	Poor: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Eoj-----	Moderate: too clayey, large stones, slope.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
McIvey-----	Severe: slope.	Severe: slope.	Fair: shrink-swell, large stones, slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
1190*: Katelana-----	Slight-----	Severe: low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Boofuss-----	Severe: ponding.	Severe: ponding, frost action.	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, ponding, excess sodium.
1201*: Biken-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Orr-----	Slight-----	Moderate: shrink-swell, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Slight.
1202*: Biken-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Biken-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1202*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
1221*: Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: seepage, piping, large stones.
Grink-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Onkeyo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
1222*: Grink-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Amelar-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Xine-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
1230*: Garfan-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Hutchley-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: thin layer.
1240*: Biken-----	Severe: depth to rock.	Moderate: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Biken-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Biken-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
1242*: Biken-----	Severe: depth to rock.	Moderate: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1242*: Barfan-----	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1243*: Biken-----	Severe: depth to rock.	Moderate: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Breko-----	Severe: cutbanks cave.	Moderate: shrink-swell, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
1245*: Biken-----	Severe: depth to rock.	Moderate: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Biken-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1251*: Alley-----	Slight-----	Moderate: shrink-swell, frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Cowgil-----	Severe: cutbanks cave.	Moderate: frost action, large stones.	Fair: large stones.	Probable-----	Probable-----	Severe: seepage.
1260*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
1270*: Boofuss-----	Severe: ponding.	Severe: ponding, frost action.	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, ponding, excess sodium.
Boofuss-----	Severe: ponding.	Severe: ponding, frost action.	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, ponding, excess sodium.
Equis-----	Severe: wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack, wetness, excess sodium.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1280*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Molion-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Broland-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
1282*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Urmafot-----	Severe: cemented pan, slope.	Severe: cemented pan, slope.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
1283*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Fax-----	Severe: cemented pan.	Moderate: cemented pan, slope, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
1287*: Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Izar-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Biken-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
1288*: Urmafot-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1291*: Maderbak-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
1300*: Barfan-----	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1310*: Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
Duffer-----	Moderate: wetness.	Severe: low strength, frost action.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Kunzler-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping, excess salt.
1321----- Sycomat	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1330*: Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Dewar-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1340*: Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1351*: Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Kyler-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Rock outcrop.						
1360*: Eganroc-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1360*:						
Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Hardzem-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
1370*:						
Wardbay-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage, large stones.
Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hardol-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: small stones.	Probable-----	Severe: seepage, large stones.
1372*:						
Wardbay-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage, large stones.
Hardol-----	Severe: slope.	Severe: slope.	Fair: large stones, slope.	Improbable: small stones.	Probable-----	Severe: seepage, large stones.
Adobe-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
1374*:						
Wardbay-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage, large stones.
Adobe-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
1380*:						
Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: seepage, piping, large stones.
Hardol-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: small stones.	Probable-----	Severe: seepage, large stones.
Eganroc-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1383*: Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: seepage, piping, large stones.
Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Rock outcrop.						
1384*: Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: seepage, piping, large stones.
Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
1385*: Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: seepage, piping, large stones.
Hyzen-----	Severe: depth to rock, large stones, slope.	Severe: depth to rock, slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Xine-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
1390*: Chen-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
1391*: Chen-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Tusel-----	Moderate: depth to rock, large stones.	Moderate: shrink-swell, slope.	Fair: depth to rock, large stones.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1392*: Chen-----	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
McIvey-----	Moderate: too clayey, large stones, slope.	Moderate: shrink-swell, slope, frost action.	Fair: shrink-swell, large stones.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Birchcreek-----	Severe: depth to rock.	Severe: shrink-swell.	Poor: depth to rock, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
1400*: Suak-----	Severe: depth to rock, large stones, slope.	Severe: slope, large stones.	Poor: depth to rock, large stones, slope.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
1430*: Hardzem-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Wardbay-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage, large stones.
1431*: Hardzem-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hackwood-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Guiser-----	Severe: cutbanks cave, large stones, slope.	Severe: slope, large stones.	Poor: large stones, slope.	Improbable: small stones.	Probable-----	Severe: seepage, large stones.
1451*: Birchcreek-----	Severe: depth to rock, large stones, slope.	Severe: shrink-swell, slope, large stones.	Poor: depth to rock, shrink-swell, large stones.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: large stones.
Segura-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1451*: Chen-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
1460----- Unsel	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage.
1480*: Amelar-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Bobs-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
1491*: Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1492*: Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Shabliss-----	Severe: cemented pan.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
Linoyer-----	Slight-----	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1493*: Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Parisa-----	Severe: cemented pan.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1494*: Pyrat-----	Severe: cutbanks cave.	Moderate: frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
McConnel-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: thin layer.	Improbable: thin layer.	Severe: seepage, excess salt.
1510*: Raph-----	Severe: cutbanks cave.	Moderate: shrink-swell, low strength, flooding.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1510*: Zimwala-----	Moderate: too clayey.	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
Heist-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1511*: Hessing-----	Severe: cutbanks cave.	Slight-----	Good-----	Probable-----	Probable-----	Severe: seepage, excess salt.
Uwell-----	Moderate: too clayey.	Moderate: shrink-swell, frost action.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Zimwala-----	Moderate: too clayey.	Severe: low strength.	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: excess salt.
1520*: Fax-----	Severe: cemented pan, slope.	Severe: slope.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Broland-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: small stones.	Probable-----	Severe: seepage.
1550*: Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Muiral-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Wardbay-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage, large stones.
1560*: Adobe-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Haunchee-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Hardzem-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
1570*: Nyala-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1570*: Broyles-----	Severe: cutbanks cave.	Slight-----	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1580*: Wredah-----	Slight-----	Moderate: frost action.	Good-----	Improbable: small stones.	Probable-----	Severe: seepage.
Selti-----	Severe: cutbanks cave, large stones.	Severe: large stones.	Poor: large stones.	Improbable: large stones.	Improbable: large stones.	Severe: seepage, large stones.
Tulase-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1610*: Sheffit-----	Moderate: too clayey, wetness.	Severe: shrink-swell, low strength.	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Severe: hard to pack.
Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.
1700*: Garfan-----	Moderate: too clayey, large stones.	Moderate: shrink-swell, large stones.	Fair: shrink-swell, large stones.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Garfan-----	Severe: slope.	Severe: slope.	Fair: shrink-swell, large stones, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
McIvey-----	Severe: slope.	Severe: slope.	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
1800*: Pookaloo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Onkeyo-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines, large stones.	Improbable: excess fines, large stones.	Severe: seepage, large stones.
Cavehill-----	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
1810*: Ilton-----	Severe: slope.	Severe: slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Yody-----	Severe: cemented pan, cutbanks cave.	Moderate: cemented pan, frost action.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Moderate: thin layer, seepage.
Blimo-----	Slight-----	Moderate: frost action.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: piping.

See footnote at end of table.

TABLE 7.--BUILDING SITE DEVELOPMENT AND CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Shallow excavations	Local roads and Streets	Roadfill	Sand	Gravel	Embankments, dikes, and levees
1820*: Sodhouse-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Probable-----	Probable-----	Severe: seepage.
Sodhouse-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Probable-----	Probable-----	Severe: seepage.
1821*: Sodhouse-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Probable-----	Probable-----	Severe: seepage.
Palinor-----	Severe: cemented pan, cutbanks cave.	Severe: cemented pan.	Poor: cemented pan.	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
1830*: Armespan-----	Severe: cutbanks cave.	Moderate: slope, frost action.	Good-----	Probable-----	Probable-----	Severe: seepage.
Cliffdown-----	Moderate: slope.	Moderate: slope.	Good-----	Improbable: excess fines.	Improbable: excess fines.	Severe: seepage.
Candelaria-----	Severe: cutbanks cave.	Moderate: slope.	Good-----	Probable-----	Probable-----	Severe: seepage, excess salt.
1850*: Clan Alpine-----	Severe: slope.	Severe: slope.	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.
Rubble land-----	Severe: large stones, slope.	Severe: slope, large stones.	Poor: large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Severe: seepage, large stones.
Rock outcrop.						
1860*: Hackwood-----	Severe: slope.	Severe: slope.	Fair: shrink-swell, slope.	Improbable: excess fines.	Improbable: excess fines.	Moderate: large stones.
Chen-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Severe: thin layer.
Tusel-----	Severe: slope.	Severe: slope.	Fair: depth to rock, large stones.	Improbable: excess fines.	Improbable: excess fines.	Severe: large stones.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 8.--ENGINEERING INDEX PROPERTIES

(The symbol < means less than; > means more than. Absence of an entry indicates that data were not estimated)

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
100*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cavehill-----	0-15	Very gravelly silt loam.	GM, GM-GC	A-2	0-15	40-55	35-50	30-45	25-35	25-35	5-10
	15-27	Very gravelly loam, very cobbly loam.	GM-GC, GM	A-2, A-4	10-45	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
104*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	1-12	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hyzen-----	0-1	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	1-6	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	6-10	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
108*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	<u>In</u>				<u>Pct</u>					<u>Pct</u>	
108*: Tecomar-----	0-3	Extremely gravelly silt loam.	GC	A-2	5-30	20-35	15-30	15-25	10-20	25-35	10-15
	3-18	Extremely cobbly silt loam, very cobbly silt loam.	GC	A-2, A-6	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	18-22	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
109*: Hyzen-----	0-2	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	2-12	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cavehill-----	0-15	Very gravelly silt loam.	GM, GM-GC	A-2	0-15	40-55	35-50	30-45	25-35	25-35	5-10
	15-27	Very gravelly loam, very cobbly loam.	GM-GC, GM	A-2, A-4	10-45	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hyzen-----	0-1	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	1-6	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	6-10	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
110*: Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	1-12	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	1-12	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
111*: Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-5	50-60	30-50	25-40	15-30	20-25	NP-5
	1-7	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-5	50-60	30-50	25-40	20-35	20-25	NP-5
	7	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hyzen-----	0-1	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	1-6	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	6-10	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
113*: Zimbob-----	0-1	Extremely gravelly loam.	GM	A-1	15-30	35-50	15-35	10-30	10-25	20-25	NP-5
	1-12	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-5	50-60	30-50	25-40	15-30	20-25	NP-5
	1-7	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-5	50-60	30-50	25-40	20-35	20-25	NP-5
	7	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
119*: Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	1-12	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
119*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
120*: Tecomar-----	0-3	Extremely gravelly silt loam.	GC	A-2	5-30	20-35	15-30	15-25	10-20	25-35	10-15
	3-18	Extremely cobbly silt loam, very cobbly silt loam.	GC	A-2, A-6	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	18-22	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	1-12	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
124*: Tecomar-----	0-3	Extremely gravelly silt loam.	GC	A-2	5-30	20-35	15-30	15-25	10-20	25-35	10-15
	3-10	Extremely cobbly silt loam, very cobbly silt loam.	GC	A-2, A-6	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	10-14	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
124*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Tecomar-----	0-3	Extremely gravelly silt loam.	GC	A-2	5-30	20-35	15-30	15-25	10-20	25-35	10-15
	3-18	Extremely cobbly silt loam, very cobbly silt loam.	GC	A-2, A-6	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	18-22	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
126*: Tecomar-----	0-3	Extremely gravelly silt loam.	GC	A-2	5-30	20-35	15-30	15-25	10-20	25-35	10-15
	3-18	Extremely cobbly silt loam, very cobbly silt loam.	GC	A-2, A-6	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	18-22	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Xine-----	0-7	Very gravelly loam.	GM	A-1, A-2	0-5	35-55	30-50	25-40	20-30	15-25	NP-5
	7-35	Very cobbly loam, very cobbly sandy loam.	GM, SM	A-2, A-4, A-1	35-50	55-80	50-75	35-60	20-45	15-25	NP-5
	35-39	Weathered bedrock	---	---	---	---	---	---	---	---	---
Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
160*: Zerk-----	0-3	Gravelly loam----	SM	A-4	0	70-85	60-75	45-60	35-50	20-25	NP-5
	3-12	Gravelly loam, very gravelly loam.	SM, GM	A-2, A-4, A-1	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	12-60	Stratified extremely gravelly loamy sand to extremely gravelly coarse sand.	GP-GM, GP	A-1	15-30	25-40	15-30	5-15	0-10	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
160*: Heist-----	0-8	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	8-40	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	40-60	Very fine sand---	SM	A-2	0	100	85-100	50-80	25-35	---	NP
Tosser-----	0-8	Loam-----	ML	A-4	0	85-100	75-100	65-90	55-80	15-25	NP-5
	8-16	Very gravelly loam.	GM	A-1, A-2	0	35-60	25-50	20-45	15-35	15-25	NP-5
	16-24	Extremely gravelly loamy sand.	GP, GP-GM	A-1	0	20-35	15-25	10-15	0-10	---	NP
	24-60	Stratified extremely gravelly loamy coarse sand to extremely gravelly sandy loam.	GP, GP-GM	A-1	0	20-35	15-25	10-15	0-10	---	NP
162*: Broyles-----	0-12	Very fine sandy loam.	ML	A-4	0	100	95-100	85-95	60-75	---	NP
	12-60	Stratified loam to gravelly loamy sand.	SM	A-2	0	70-100	60-95	30-40	25-35	---	NP
Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5
166*: Tosser-----	0-8	Loam-----	ML	A-4	0	85-100	75-100	65-90	55-80	15-25	NP-5
	8-16	Very gravelly loam.	GM	A-1, A-2	0	35-60	25-50	20-45	15-35	15-25	NP-5
	16-24	Extremely gravelly loamy sand.	GP, GP-GM	A-1	0	20-35	15-25	10-15	0-10	---	NP
	24-60	Stratified extremely gravelly loamy coarse sand to extremely gravelly sandy loam.	GP, GP-GM	A-1	0	20-35	15-25	10-15	0-10	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
166*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
Linoyer-----	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
170*: Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
Hessing-----	0-4	Silt loam-----	CL-ML	A-4	0	100	100	95-100	85-95	25-30	5-10
	4-15	Silt loam, silty clay loam.	CL	A-6	0	100	100	95-100	85-95	30-40	10-20
	15-31	Gravelly loam, gravelly sandy loam.	GM, SM	A-4	0	60-80	50-75	45-55	35-50	25-30	NP-5
	31-60	Stratified very gravelly loamy coarse sand to extremely gravelly sand.	GP-GM, GW-GM	A-1	0	35-45	20-35	10-20	5-10	---	NP
Zerk-----	0-3	Gravelly loam----	SM	A-4	0	70-85	60-75	45-60	35-50	20-25	NP-5
	3-12	Gravelly loam, very gravelly loam.	SM, GM	A-2, A-4, A-1	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	12-60	Stratified extremely gravelly loamy sand to extremely gravelly coarse sand.	GP-GM, GP	A-1	15-30	25-40	15-30	5-15	0-10	---	NP
173*: Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
173*: Yody-----	0-3	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	3-16	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	16-38	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	38-60	Cemented material	---	---	---	---	---	---	---	---	---
Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5
174*: Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
179*: Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
Pern-----	0-14	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
	14-20	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
	20-60	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
181*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
Cowgill-----	0-4	Very gravelly sandy loam.	GM, GM-GC	A-1, A-2	0-5	40-55	30-45	15-30	10-25	15-25	NP-10
	4-21	Very gravelly sandy clay loam.	GC	A-2	10-25	50-65	40-55	35-50	20-30	30-40	10-20
	21-61	Very cobbly loamy sand, very gravelly loamy sand, extremely gravelly sand.	GM, GP-GM, GP	A-1	10-35	35-55	25-50	15-30	0-15	---	NP
Broyles-----	0-12	Very fine sandy loam.	ML	A-4	0	100	95-100	85-95	60-75	---	NP
	12-60	Stratified loam to gravelly loamy sand.	SM	A-2	0	70-100	60-95	30-40	25-35	---	NP
185*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
185*: Tulase-----	0-5	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	5-70	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
189*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
Linoyer-----	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
190*: Cowgil-----	0-4	Very gravelly sandy loam.	GM, GM-GC	A-1, A-2	0-5	40-55	30-45	15-30	10-25	15-25	NP-10
	4-21	Very gravelly sandy clay loam.	GC	A-2	10-25	50-65	40-55	35-50	20-30	30-40	10-20
	21-61	Very cobbly loamy sand, very gravelly loamy sand, extremely gravelly sand.	GM, GP-GM, GP	A-1	10-35	35-55	25-50	15-30	0-15	---	NP
Yody-----	0-3	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	3-16	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	16-38	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	38-60	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
190*: Fax-----	0-3	Very cobbly coarse sandy loam.	SM, GM	A-1	25-50	50-75	45-65	20-40	10-20	15-25	NP-5
	3-12	Very gravelly sandy clay loam, very cobbly sandy clay loam.	GC	A-2, A-6	0-40	40-70	30-60	20-50	10-40	30-40	10-20
	12-22	Very gravelly sandy clay loam, very cobbly coarse sandy loam.	GC, GM-GC, SC, SC-SM	A-2	10-50	40-65	30-55	15-45	10-25	25-35	5-15
	22-48	Cemented material	---	---	---	---	---	---	---	---	---
192*: Cowgil-----	0-4	Very gravelly sandy loam.	GM, GM-GC	A-1, A-2	0-5	40-55	30-45	15-30	10-25	15-25	NP-10
	4-21	Very gravelly sandy clay loam.	GC	A-2	10-25	50-65	40-55	35-50	20-30	30-40	10-20
	21-61	Very cobbly loamy sand, very gravelly loamy sand, extremely gravelly sand.	GM, GP-GM, GP	A-1	10-35	35-55	25-50	15-30	0-15	---	NP
Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
201*: Hyzen-----	0-1	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	1-6	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	6-10	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
201*: Tecomar-----	0-3	Extremely gravelly silt loam.	GC	A-2	5-30	20-35	15-30	15-25	10-20	25-35	10-15
	3-18	Extremely cobbly silt loam, very cobbly silt loam.	GC	A-2, A-6	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	18-22	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
205*: Hyzen-----	0-1	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	1-6	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	6-10	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardzem-----	0-1	Channery loam----	SC-SM	A-4	0-25	70-80	65-75	50-70	35-50	20-30	5-10
	1-21	Very channery loam, extremely channery loam, extremely channery clay loam.	GC	A-2	10-25	20-50	15-45	10-40	10-35	30-40	10-15
	21-52	Weathered bedrock	---	---	---	---	---	---	---	---	---
	52	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
220*: Hutchley-----	0-3	Very gravelly loam.	GM-GC, GM	A-4, A-2	5-15	55-65	40-50	35-45	20-40	25-35	5-10
	3-12	Very gravelly clay loam, very cobbly clay loam.	GC	A-2	10-55	50-65	30-60	25-55	20-35	35-45	15-20
	12-16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
McIvey-----	0-12	Very gravelly loam.	GC	A-2	0-10	35-60	25-50	25-45	15-35	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	10-55	45-60	35-50	35-45	30-45	45-55	20-30
Suak-----	0-10	Very stony loam	GM, GM-GC	A-1, A-2	40-55	45-65	40-60	30-40	20-35	20-30	NP-10
	10-25	Extremely cobbly loam, extremely gravelly loam.	GC	A-2	30-60	25-45	20-35	15-30	10-25	30-35	10-15
	25	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches Pct	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In										
223*: Hutchley-----	0-3	Very gravelly loam.	GM-GC, GM	A-4, A-2	5-15	55-65	40-50	35-45	20-40	25-35	5-10
	3-12	Very gravelly clay loam, very cobbly clay loam.	GC	A-2	10-55	50-65	30-60	25-55	20-35	35-45	15-20
	12-16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
McIvey-----	0-12	Very gravelly loam.	GC	A-2	0-10	35-60	25-50	25-45	15-35	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	10-55	45-60	35-50	35-45	30-45	45-55	20-30
Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
224*: Hutchley-----	0-3	Very gravelly loam.	GM-GC, GM	A-4, A-2	5-15	55-65	40-50	35-45	20-40	25-35	5-10
	3-12	Very gravelly clay loam, very cobbly clay loam.	GC	A-2	10-55	50-65	30-60	25-55	20-35	35-45	15-20
	12-16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
McIvey-----	0-12	Very gravelly loam.	GC	A-2	0-10	35-60	25-50	25-45	15-35	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	10-55	45-60	35-50	35-45	30-45	45-55	20-30
Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct						
226*: Hutchley-----	0-3	Very gravelly loam.	GM-GC, GM	A-4, A-2	5-15	55-65	40-50	35-45	20-40	25-35	5-10
	3-12	Very gravelly clay loam, very cobbly clay loam.	GC	A-2	10-55	50-65	30-60	25-55	20-35	35-45	15-20
	12-16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Tusel-----	0-13	Cobbly loam-----	SM, ML, SC-SM, CL-ML	A-4	15-35	80-95	75-90	55-70	40-55	20-30	NP-10
	13-42	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam.	GC	A-2	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	42-46	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Suak-----	0-10	Very stony loam	GM, GM-GC	A-1, A-2	40-55	45-65	40-60	30-40	20-35	20-30	NP-10
	10-25	Extremely cobbly loam, extremely gravelly loam.	GC	A-2	30-60	25-45	20-35	15-30	10-25	30-35	10-15
	25	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
230*: Linoyer-----	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
231----- Linoyer	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
232*: Linoyer-----	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
232*: Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
233----- Linoyer	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-45	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
	45-60	Extremely gravelly loamy sand.	GM, GP-GM, GP	A-1	0	20-40	10-25	5-20	0-15	15-20	NP
241*: Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
Raph-----	0-4	Loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	80-90	60-70	25-35	5-15
	4-30	Loam, silt loam	CL	A-6	0	90-100	85-100	80-95	60-75	30-35	10-15
	30-42	Gravelly sandy loam.	SC-SM, GM-GC	A-2	0	55-80	50-75	35-50	20-30	25-30	5-10
	42-60	Stratified fine sandy loam to very gravelly coarse sand.	SM, GM	A-1	0	55-80	50-75	15-35	10-20	15-25	NP-5
242*: Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
243*:											
Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
Heist-----	0-8	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	8-40	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	40-60	Very fine sand---	SM	A-2	0	100	85-100	50-80	25-35	---	NP
Nyak-----	0-9	Clay loam-----	CL	A-6, A-7	0	100	100	75-95	65-90	35-45	15-20
	9-14	Fine sandy loam	ML	A-4	0	100	100	80-95	50-70	20-30	NP-5
	14-60	Stratified fine sandy loam to silty clay loam.	ML	A-4	0	100	100	75-95	65-85	20-30	NP-5
244*:											
Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
Raph-----	0-4	Loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	80-90	60-70	25-35	5-15
	4-30	Loam, silt loam	CL	A-6	0	90-100	85-100	80-95	60-75	30-35	10-15
	30-42	Gravelly sandy loam.	SC-SM, GM-GC	A-2	0	55-80	50-75	35-50	20-30	25-30	5-10
	42-60	Stratified fine sandy loam to very gravelly coarse sand.	SM, GM	A-1	0	55-80	50-75	15-35	10-20	15-25	NP-5
246*:											
Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
250*: Sheffit-----	0-3	Silt loam-----	CL-ML, ML	A-4	0	100	95-100	80-100	65-85	25-35	5-10
	3-60	Stratified silt loam to clay.	CL, ML, MH	A-7	0	100	95-100	90-100	85-95	40-60	15-25
Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
252*: Sheffit-----	0-3	Silt loam-----	CL-ML, ML	A-4	0	100	95-100	80-100	65-85	25-35	5-10
	3-60	Stratified silt loam to clay.	CL, ML, MH	A-7	0	100	95-100	90-100	85-95	40-60	15-25
Equis-----	0-6	Silty clay-----	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	6-30	Silty clay, clay	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	30-50	Silty clay loam, silty clay.	MH	A-7	0	100	100	95-100	95-100	50-70	15-25
	50-60	Silty clay loam, silt loam, silty clay.	MH	A-7	0	100	95-100	90-100	85-95	50-70	15-25
Equis-----	0-6	Silty clay-----	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	6-30	Silty clay, clay	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	30-50	Silty clay, silty clay loam.	MH	A-7	0	100	100	95-100	95-100	50-70	15-25
	50-60	Silty clay loam, silty clay, silt loam.	MH, ML	A-7, A-6	0	100	95-100	90-100	85-95	35-70	10-25
253*: Sheffit-----	0-3	Fine sand-----	SP-SM, SM	A-2, A-3	0	100	100	85-100	5-15	---	NP
	3-18	Loam-----	CL-ML, CL	A-4, A-6	0	100	100	75-90	50-70	25-35	5-15
	18-60	Clay, silty clay	CL, CH	A-7	0	100	100	85-100	80-95	45-60	20-30
Sheffit-----	0-3	Silt loam-----	CL-ML, ML	A-4	0	100	95-100	80-100	65-85	25-35	5-10
	3-60	Stratified silt loam to clay.	CL, ML, MH	A-7	0	100	95-100	90-100	85-95	40-60	15-25
Zorravista-----	0-5	Fine sand-----	SP-SM, SM	A-2, A-3	0	100	100	75-90	5-20	---	NP
	5-44	Fine sand-----	SP-SM, SM	A-2, A-3	0	100	100	75-90	5-20	---	NP
	44-60	Silty clay loam	CL	A-6, A-7	0	100	100	85-95	80-90	35-45	15-20
254*: Sheffit-----	0-3	Silt loam-----	CL-ML, ML	A-4	0	100	95-100	80-100	65-85	25-35	5-10
	3-60	Stratified silt loam to clay.	CL, ML, MH	A-7	0	100	95-100	90-100	85-95	40-60	15-25
Boofuss-----	0-5	Silty clay-----	CH, CL	A-7	0	100	100	90-100	85-95	45-60	25-35
	5-20	Stratified silty clay loam to clay.	CH, CL	A-7	0	100	100	70-95	65-90	40-60	20-35
	20-60	Stratified fine sandy loam to silt loam.	SM, ML	A-2, A-4	0	95-100	90-100	65-85	30-60	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
255*: Sheffit-----	0-3	Silt loam-----	CL-ML, ML	A-4	0	100	95-100	80-100	65-85	25-35	5-10
	3-60	Stratified silt loam to clay.	CL, ML, MH	A-7	0	100	95-100	90-100	85-95	40-60	15-25
Sheffit-----	0-3	Silt loam-----	CL-ML, ML	A-4	0	100	95-100	80-100	65-85	25-35	5-10
	3-60	Stratified silt loam to clay.	CL, ML, MH	A-7	0	100	95-100	90-100	85-95	40-60	15-25
Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
262----- Equis	0-6	Silt loam-----	ML	A-4	0	100	100	95-100	75-90	30-40	5-10
	6-30	Silty clay, clay	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	30-50	Silty clay, silty clay loam.	MH	A-7	0	100	100	95-100	95-100	50-70	15-25
	50-60	Silty clay loam, silty clay, silt loam.	MH, ML	A-7, A-6	0	100	95-100	90-100	85-95	35-70	10-25
266*: Equis-----	0-6	Silty clay-----	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	6-30	Silty clay, clay	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	30-50	Silty clay, silty clay loam.	MH	A-7	0	100	100	95-100	95-100	50-70	15-25
	50-60	Silty clay loam, silty clay, silt loam.	MH, ML	A-7, A-6	0	100	95-100	90-100	85-95	35-70	10-25
Equis-----	0-6	Silty clay-----	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	6-30	Silty clay, clay	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	30-50	Silty clay, silty clay loam.	MH	A-7	0	100	100	95-100	95-100	50-70	15-25
	50-60	Silty clay loam, silty clay, silt loam.	MH, ML	A-7, A-6	0	100	95-100	90-100	85-95	35-70	10-25
Kolda-----	0-6	Silt loam-----	CL-ML, CL	A-4, A-6	0	100	100	85-100	70-90	25-35	5-15
	6-22	Silt loam-----	CL-ML, CL	A-4, A-6	0	100	100	85-100	65-90	25-35	5-15
	22-60	Clay, silty clay	CH, CL	A-7	0	100	100	95-100	90-100	45-60	20-30
267*: Equis-----	0-6	Silty clay-----	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	6-30	Silty clay, clay	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	30-50	Silty clay, silty clay loam.	MH	A-7	0	100	100	95-100	95-100	50-70	15-25
	50-60	Silty clay loam, silty clay, silt loam.	MH, ML	A-7, A-6	0	100	95-100	90-100	85-95	35-70	10-25
Devilsgait-----	0-10	Silt loam-----	CL-ML, ML	A-4	0	100	100	90-100	75-95	25-35	5-10
	10-60	Stratified silt loam to silty clay loam.	CL, ML	A-6, A-7	0	100	100	95-100	80-95	30-50	10-20

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
270*: Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Maderbak-----	0-3	Very gravelly clay loam.	GC	A-2	0-5	45-55	35-45	25-35	15-25	30-40	10-20
	3-17	Very gravelly clay loam, very gravelly clay.	GC	A-2, A-7	0-5	30-60	25-50	20-50	15-40	40-55	20-30
	17-29	Very gravelly clay loam, very gravelly silty clay, very gravelly clay.	GC	A-2, A-7	0-5	30-60	25-50	20-50	15-45	40-55	20-30
	29	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rubble land-----	0-60	Fragmental material.	GP	A-1	75-90	0-10	0-5	0-5	0	---	NP
271*: Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
275*:											
Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Upatad-----	0-3	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	3-15	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
276*:											
Stewval-----	0-2	Very gravelly fine sandy loam.	GM-GC	A-2	0-10	35-55	30-45	20-35	10-20	20-25	5-10
	2-10	Extremely gravelly loam, very gravelly clay loam, very gravelly loam.	GC	A-2	0-25	20-55	15-45	10-35	10-30	30-40	10-20
	10-14	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Maderbak-----	0-3	Very gravelly clay loam.	GC	A-2	0-5	45-55	35-45	25-35	15-25	30-40	10-20
	3-17	Very gravelly clay loam, very gravelly clay.	GC	A-2, A-7	0-5	30-60	25-50	20-50	15-40	40-55	20-30
	17-29	Very gravelly clay loam, very gravelly silty clay, very gravelly clay.	GC	A-2, A-7	0-5	30-60	25-50	20-50	15-45	40-55	20-30
	29	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct						
276*: Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
279*: Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Broland-----	0-3	Very gravelly loam.	GM, GC, GM-GC	A-2, A-4, A-6	0-10	40-55	30-45	25-45	25-40	20-35	NP-15
	3-9	Gravelly clay loam, gravelly sandy clay loam.	SC, GC, CL	A-2, A-6, A-7	0-10	60-85	50-75	35-65	30-55	35-45	15-20
	9-16	Extremely gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam.	GC	A-2	5-25	40-60	30-55	15-35	15-25	30-40	10-15
	16-19	Extremely gravelly sandy loam, very gravelly sandy loam.	GM-GC, GM	A-1, A-2	0-25	30-60	20-50	15-30	10-20	20-30	NP-10
	19-40	Cemented material	---	---	---	---	---	---	---	---	---
	40-60	Extremely gravelly coarse sand.	GP-GM, GP	A-1	0-5	20-35	10-25	5-20	0-10	---	NP
Yody-----	0-3	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	3-16	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	16-38	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	38-60	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
282----- Palinor	0-10	Very gravelly loam.	GM	A-1, A-2	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
283*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
286*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
286*: Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---
287*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Wintermute-----	0-2	Gravelly silt loam.	GM, ML	A-4	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	2-11	Gravelly silt loam, gravelly fine sandy loam.	GM, SM	A-4, A-2	0	60-85	50-75	40-65	30-50	15-25	NP-5
	11-60	Stratified very gravelly sandy loam to extremely cobbly loamy sand.	GP-GM, GM	A-1	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
288*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
288*: Broiland-----	0-3	Very gravelly loam.	GM, GC, GM-GC	A-2, A-4, A-6	0-10	40-55	30-45	25-45	25-40	20-35	NP-15
	3-9	Gravelly clay loam, gravelly sandy clay loam.	SC, GC, CL	A-2, A-6, A-7	0-10	60-85	50-75	35-65	30-55	35-45	15-20
	9-16	Extremely gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam.	GC	A-2	5-25	40-60	30-55	15-35	15-25	30-40	10-15
	16-19	Extremely gravelly sandy loam, very gravelly sandy loam.	GM-GC, GM	A-1, A-2	0-25	30-60	20-50	15-30	10-20	20-30	NP-10
	19-40	Cemented material	---	---	---	---	---	---	---	---	---
	40-60	Extremely gravelly coarse sand.	GP-GM, GP	A-1	0-5	20-35	10-25	5-20	0-10	---	NP
290*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
291*: Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Borvant-----	0-2	Gravelly loam----	GM-GC, SC-SM	A-4	0-10	60-80	55-75	45-65	35-50	20-30	5-10
	2-19	Very gravelly loam, very cobbly loam, extremely gravelly loam.	GM-GC	A-2, A-4	20-55	35-65	30-60	25-50	20-40	20-30	5-10
	19-43	Indurated material.	---	---	---	---	---	---	---	---	---
Biken-----	0-9	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	9-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
292*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
292*: Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Urmafot-----	0-9	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	9-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
295*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Roden-----	0-2	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	2-11	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	11	Weathered bedrock	---	---	---	---	---	---	---	---	---
Roden-----	0-1	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	1-8	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	8-12	Weathered bedrock	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
296*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Palinor-----	0-10	Very gravelly loam.	GM	A-1, A-2	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
297*: Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches Pct	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In										
297*: Amelar-----	0-6	Very gravelly loam.	GM-GC, GC	A-2, A-4, A-6	5-15	40-60	35-50	30-45	25-40	25-35	5-15
	6-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
Izar-----	0-3	Very gravelly loam.	GC	A-2	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	3-14	Very gravelly loam, extremely gravelly loam.	GC	A-2	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
300*: Playas-----	0-6	Silty clay-----	CL, CH, MH	A-7	0	100	100	100	90-100	45-75	20-40
	6-60	Silty clay loam, clay, silty clay.	CL, CH, MH	A-7	0	100	100	100	90-100	45-75	20-40
Orupa-----	0-4	Silty clay-----	CL, CH	A-7	0	100	100	80-100	80-100	45-60	25-40
	4-60	Clay loam, silty clay, clay.	CL, CH	A-7	0	100	100	80-100	80-90	40-55	20-30
310*: Dune land-----	0-6	Fine sand-----	SP, SP-SM, SM	A-3, A-2	0	100	100	60-80	0-25	---	NP
	6-60	Sand, fine sand	SP, SP-SM, SM	A-3, A-2	0	100	100	50-80	0-25	---	NP
Playas-----	0-6	Silty clay-----	CL, CH, MH	A-7	0	100	100	100	90-100	45-75	20-40
	6-60	Silty clay loam, clay, silty clay.	CL, CH, MH	A-7	0	100	100	100	90-100	45-75	20-40
321*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
321*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
322*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Roden-----	0-1	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	1-8	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	8-12	Weathered bedrock	---	---	---	---	---	---	---	---	---
Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
323*: Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Bobs-----	0-3	Very gravelly loam.	GM	A-1, A-2	0-15	40-55	35-50	30-45	20-35	20-25	NP-5
	3-14	Gravelly loam, gravelly very fine sandy loam, gravelly silt loam.	GM, SM	A-4	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	14-18	Indurated material.	---	---	---	---	---	---	---	---	---
Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
326*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
326*: Urmafot-----	0-9	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	9-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Roden-----	0-1	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	1-8	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	8-12	Weathered bedrock	---	---	---	---	---	---	---	---	---
327*: Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Cassiro-----	0-5	Stony loam-----	SC-SM	A-4	15-25	80-95	65-75	60-70	40-50	20-30	5-10
	5-60	Extremely gravelly clay, very gravelly clay.	GC	A-2	10-20	30-50	25-45	20-40	20-35	50-65	30-40
Biken-----	0-5	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	5-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30-34	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
328*: Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Tecomar-----	0-3	Extremely gravelly silt loam.	GC	A-2	5-30	20-35	15-30	15-25	10-20	25-35	10-15
	3-18	Extremely cobbly silt loam, very cobbly silt loam.	GC	A-2, A-6	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	18-22	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
334*: Parisa-----	0-4	Gravelly loam----	GM, SM	A-2, A-4	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	4-26	Very gravelly loam, very gravelly sandy loam.	GM, SM	A-1, A-2	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	26-47	Indurated material.	---	---	---	---	---	---	---	---	---
	47-60	Extremely gravelly coarse sandy loam.	GP, GP-GM	A-1	0-15	15-35	10-25	5-15	0-10	---	NP
Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
334*: Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---
336----- Parisa	0-4	Gravelly loam----	GM, SM	A-2, A-4	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	4-26	Very gravelly loam, very gravelly sandy loam.	GM, SM	A-1, A-2	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	26-47	Indurated material.	---	---	---	---	---	---	---	---	---
	47-60	Extremely gravelly coarse sandy loam.	GP, GP-GM	A-1	0-15	15-35	10-25	5-15	0-10	---	NP
337*: Parisa-----	0-4	Gravelly loam----	GM, SM	A-2, A-4	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	4-26	Very gravelly loam, very gravelly sandy loam.	GM, SM	A-1, A-2	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	26-47	Indurated material.	---	---	---	---	---	---	---	---	---
	47-60	Extremely gravelly coarse sandy loam.	GP, GP-GM	A-1	0-15	15-35	10-25	5-15	0-10	---	NP
Wintermute-----	0-2	Gravelly silt loam.	GM, ML	A-4	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	2-11	Gravelly silt loam, gravelly fine sandy loam.	GM, SM	A-4, A-2	0	60-85	50-75	40-65	30-50	15-25	NP-5
	11-60	Stratified very gravelly sandy loam to extremely cobbly loamy sand.	GP-GM, GM	A-1	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
338*: Parisa-----	0-4	Gravelly loam----	GM, SM	A-2, A-4	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	4-26	Very gravelly loam, very gravelly sandy loam.	GM, SM	A-1, A-2	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	26-47	Indurated material.	---	---	---	---	---	---	---	---	---
	47-60	Extremely gravelly coarse sandy loam.	GP, GP-GM	A-1	0-15	15-35	10-25	5-15	0-10	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
338*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
340*: Izar-----	0-3	Very gravelly loam.	GC	A-2	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	3-14	Very gravelly loam, extremely gravelly loam.	GC	A-2	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Izar-----	0-3	Very gravelly loam.	GC	A-2	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	3-14	Very gravelly loam, extremely gravelly loam.	GC	A-2	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
346*: Izar-----	0-3	Very gravelly loam.	GC	A-2	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	3-14	Very gravelly loam, extremely gravelly loam.	GC	A-2	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Roden-----	0-2	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	2-11	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	11	Weathered bedrock	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	<u>In</u>				<u>Pct</u>					<u>Pct</u>	
346*: Zerk-----	0-3	Gravelly loam----	SM	A-4	0	70-85	60-75	45-60	35-50	20-25	NP-5
	3-12	Gravelly loam, very gravelly loam.	SM, GM	A-2, A-4, A-1	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	12-60	Stratified extremely gravelly loamy sand to extremely gravelly coarse sand.	GP-GM, GP	A-1	15-30	25-40	15-30	5-15	0-10	---	NP
351*: Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
353----- Heist	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5
356*: Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5
Wintermute-----	0-2	Gravelly silt loam.	GM, ML	A-4	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	2-11	Gravelly silt loam, gravelly fine sandy loam.	GM, SM	A-4, A-2	0	60-85	50-75	40-65	30-50	15-25	NP-5
	11-60	Stratified very gravelly sandy loam to extremely cobbly loamy sand.	GP-GM, GM	A-1	15-45	25-55	15-45	10-35	5-25	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
360*: Belmill-----	0-3	Gravelly loam----	GM, SM, ML	A-2, A-4	0	55-80	50-75	35-65	25-55	15-25	NP-5
	3-13	Gravelly loam----	GC, SC, CL	A-2, A-6	0	60-80	55-75	40-70	30-55	25-35	10-15
	13-19	Extremely gravelly loam, extremely gravelly sandy loam, extremely gravelly sandy clay loam.	GP-GC, GC	A-2	0	20-30	15-25	10-20	5-20	25-35	10-15
	19-30	Extremely gravelly loam, extremely gravelly sandy loam.	GP-GC, GM-GC	A-2	0	20-30	15-25	10-20	5-20	20-25	5-10
	30-60	Extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0	20-30	15-25	10-20	0-15	---	NP
Belmill-----	0-3	Gravelly sandy loam.	GM, SM	A-1, A-2, A-4	0	55-80	50-75	35-60	20-45	15-25	NP-5
	3-13	Gravelly loam----	GC, SC, CL	A-2, A-6	0	60-80	55-75	40-70	30-55	25-35	10-15
	13-19	Extremely gravelly loam, extremely gravelly sandy loam, extremely gravelly sandy clay loam.	GP-GC, GC	A-2	0	20-30	15-25	10-20	5-20	25-35	10-15
	19-30	Extremely gravelly loam, extremely gravelly sandy loam.	GP-GC, GM-GC	A-2	0	20-30	15-25	10-20	5-20	20-25	5-10
	30-60	Extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0	20-30	15-25	10-20	0-15	---	NP
361*: Belmill-----	0-3	Gravelly loam----	GM, SM, ML	A-2, A-4	0	55-80	50-75	35-65	25-55	15-25	NP-5
	3-13	Gravelly loam----	GC, SC, CL	A-2, A-6	0	60-80	55-75	40-70	30-55	25-35	10-15
	13-19	Extremely gravelly loam, extremely gravelly sandy loam, extremely gravelly sandy clay loam.	GP-GC, GC	A-2	0	20-30	15-25	10-20	5-20	25-35	10-15
	19-30	Extremely gravelly loam, extremely gravelly sandy loam.	GP-GC, GM-GC	A-2	0	20-30	15-25	10-20	5-20	20-25	5-10
	30-60	Extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0	20-30	15-25	10-20	0-15	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
361*: Cowgill-----	0-4	Very gravelly sandy loam.	GM, GM-GC	A-1, A-2	0-5	40-55	30-45	15-30	10-25	15-25	NP-10
	4-21	Very gravelly sandy clay loam.	GC	A-2	10-25	50-65	40-55	35-50	20-30	30-40	10-20
	21-61	Very cobbly loamy sand, very gravelly loamy sand, extremely gravelly sand.	GM, GP-GM, GP	A-1	10-35	35-55	25-50	15-30	0-15	---	NP
Selti-----	0-4	Very stony coarse sandy loam.	SM	A-1, A-2	25-55	60-80	40-65	25-40	15-30	15-25	NP-5
	4-30	Very cobbly sandy clay loam, very cobbly sandy loam.	GM-GC, GC	A-2, A-4, A-6	25-55	50-60	45-55	30-50	25-40	25-35	5-15
	30-60	Extremely stony loamy coarse sand.	GP, GP-GM, SP, SP-SM	A-1	45-65	45-70	20-45	10-20	0-10	---	NP
372----- Automal	0-12	Gravelly silt loam.	GM, ML, GM-GC, CL-ML	A-4	0-10	60-85	50-75	45-70	35-65	25-35	5-10
	12-32	Very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam.	GP-GM, GM, GP-GC, GM-GC	A-2, A-1	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	32-60	Extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam.	GP, GP-GM	A-1	0-10	25-35	15-25	5-15	0-10	15-25	NP-5
373*: Automal-----	0-12	Gravelly silt loam.	GM, ML, GM-GC, CL-ML	A-4	0-10	60-85	50-75	45-70	35-65	25-35	5-10
	12-32	Very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam.	GP-GM, GM, GP-GC, GM-GC	A-2, A-1	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	32-60	Extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam.	GP, GP-GM	A-1	0-10	25-35	15-25	5-15	0-10	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches Pct	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In										
373*: Wintermute-----	0-2	Gravelly silt loam.	GM, ML	A-4	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	2-11	Gravelly silt loam, gravelly fine sandy loam.	GM, SM	A-4, A-2	0	60-85	50-75	40-65	30-50	15-25	NP-5
	11-60	Stratified very gravelly sandy loam to extremely cobbly loamy sand.	GP-GM, GM	A-1	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
380*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Parisa-----	0-4	Gravelly loam----	GM, SM	A-2, A-4	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	4-26	Very gravelly loam, very gravelly sandy loam.	GM, SM	A-1, A-2	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	26-47	Indurated material.	---	---	---	---	---	---	---	---	---
	47-60	Extremely gravelly coarse sandy loam.	GP, GP-GM	A-1	0-15	15-35	10-25	5-15	0-10	---	NP
411*: Cassiro-----	0-5	Stony loam-----	SC-SM	A-4	15-25	80-95	65-75	60-70	40-50	20-30	5-10
	5-60	Extremely gravelly clay, very gravelly clay.	GC	A-2	10-20	30-50	25-45	20-40	20-35	50-65	30-40
Cassiro-----	0-5	Stony loam-----	SC-SM	A-4	15-25	80-95	65-75	60-70	40-50	20-30	5-10
	5-60	Extremely gravelly clay, very gravelly clay.	GC	A-2	10-20	30-50	25-45	20-40	20-35	50-65	30-40
413*: Cassiro-----	0-5	Stony loam-----	SC-SM	A-4	15-25	80-95	65-75	60-70	40-50	20-30	5-10
	5-60	Extremely gravelly clay, very gravelly clay.	GC	A-2	10-20	30-50	25-45	20-40	20-35	50-65	30-40

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
413*: Fax-----	0-3	Very cobbly coarse sandy loam.	SM, GM	A-1	25-50	50-75	45-65	20-40	10-20	15-25	NP-5
	3-12	Very gravelly sandy clay loam, very cobbly sandy clay loam.	GC	A-2, A-6	0-40	40-70	30-60	20-50	10-40	30-40	10-20
	12-22	Very gravelly sandy clay loam, very cobbly coarse sandy loam.	GC, GM-GC, SC, SC-SM	A-2	10-50	40-65	30-55	15-45	10-25	25-35	5-15
	22-48	Cemented material	---	---	---	---	---	---	---	---	---
Belmill-----	0-3	Gravelly sandy loam.	GM, SM	A-1, A-2, A-4	0	55-80	50-75	35-60	20-45	15-25	NP-5
	3-13	Gravelly loam----	GC, SC, CL	A-2, A-6	0	60-80	55-75	40-70	30-55	25-35	10-15
	13-19	Extremely gravelly loam, extremely gravelly sandy loam, extremely gravelly sandy clay loam.	GP-GC, GC	A-2	0	20-30	15-25	10-20	5-20	25-35	10-15
	19-30	Extremely gravelly loam, extremely gravelly sandy loam.	GP-GC, GM-GC	A-2	0	20-30	15-25	10-20	5-20	20-25	5-10
	30-60	Extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0	20-30	15-25	10-20	0-15	---	NP
414*: Cassiro-----	0-5	Stony loam-----	SC-SM	A-4	15-25	80-95	65-75	60-70	40-50	20-30	5-10
	5-60	Extremely gravelly clay, very gravelly clay.	GC	A-2	10-20	30-50	25-45	20-40	20-35	50-65	30-40
Belmill-----	0-3	Gravelly loam----	GM, SM, ML	A-2, A-4	0	55-80	50-75	35-65	25-55	15-25	NP-5
	3-13	Gravelly loam----	GC, SC, CL	A-2, A-6	0	60-80	55-75	40-70	30-55	25-35	10-15
	13-19	Extremely gravelly loam, extremely gravelly sandy loam, extremely gravelly sandy clay loam.	GP-GC, GC	A-2	0	20-30	15-25	10-20	5-20	25-35	10-15
	19-30	Extremely gravelly loam, extremely gravelly sandy loam.	GP-GC, GM-GC	A-2	0	20-30	15-25	10-20	5-20	20-25	5-10
	30-60	Extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0	20-30	15-25	10-20	0-15	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
421----- Wintermute	0-2	Gravelly sandy loam.	GM, ML, SM	A-2, A-4	0-10	60-85	50-75	40-65	30-55	20-25	NP-5
	2-11	Gravelly silt loam, gravelly fine sandy loam.	GM, SM	A-4, A-2	0	60-85	50-75	40-65	30-50	15-25	NP-5
	11-60	Stratified very gravelly sandy loam to extremely cobbly loamy sand.	GP-GM, GM	A-1	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
425*: Wintermute-----	0-2	Loamy sand-----	SM	A-2, A-4	0	85-100	75-100	50-80	20-40	---	NP
	2-11	Gravelly silt loam, gravelly fine sandy loam.	GM, SM	A-4, A-2	0	60-85	50-75	40-65	30-50	15-25	NP-5
	11-60	Stratified very gravelly sandy loam to extremely cobbly loamy sand.	GP-GM, GM	A-1	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
Wintermute-----	0-2	Gravelly silt loam.	GM, ML	A-4	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	2-11	Gravelly silt loam, gravelly fine sandy loam.	GM, SM	A-4, A-2	0	60-85	50-75	40-65	30-50	15-25	NP-5
	11-60	Stratified very gravelly sandy loam to extremely cobbly loamy sand.	GP-GM, GM	A-1	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
434*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hyzen-----	0-2	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	2-12	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hyzen-----	0-1	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	1-6	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	6-10	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
436*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hyzen-----	0-2	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	2-12	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cavehill-----	0-15	Very gravelly silt loam.	GM, GM-GC	A-2	0-15	40-55	35-50	30-45	25-35	25-35	5-10
	15-27	Very gravelly loam, very cobbly loam.	GM-GC, GM	A-2, A-4	10-45	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
437*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches Pct	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In										
440*: Hessing-----	0-4	Silt loam-----	CL-ML	A-4	0	100	100	95-100	85-95	25-30	5-10
	4-14	Very fine sandy loam, silt loam.	CL-ML	A-4	0	95-100	95-100	85-95	60-70	25-30	5-10
	14-31	Gravelly loam, gravelly sandy loam.	GM, SM	A-4	0	60-80	50-75	45-55	35-50	25-30	NP-5
	31-60	Stratified very gravelly loamy coarse sand to extremely gravelly sand.	GP-GM, GW-GM	A-1	0	35-45	20-35	10-20	5-10	---	NP
Zerk-----	0-3	Gravelly loam----	SM	A-4	0	70-85	60-75	45-60	35-50	20-25	NP-5
	3-12	Gravelly loam, very gravelly loam.	SM, GM	A-2, A-4, A-1	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	12-60	Stratified extremely gravelly loamy sand to extremely gravelly coarse sand.	GP-GM, GP	A-1	15-30	25-40	15-30	5-15	0-10	---	NP
450*: Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---
Yody-----	0-3	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	3-16	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	16-38	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	38-60	Cemented material	---	---	---	---	---	---	---	---	---
455*: Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct						
455*: Linoyer-----	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
458*: Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---
Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
471*: Hessing-----	0-4	Silt loam-----	CL-ML	A-4	0	100	100	95-100	85-95	25-30	5-10
	4-14	Very fine sandy loam, silt loam.	CL-ML	A-4	0	95-100	95-100	85-95	60-70	25-30	5-10
	14-31	Gravelly loam, gravelly sandy loam.	GM, SM	A-4	0	60-80	50-75	45-55	35-50	25-30	NP-5
	31-60	Stratified very gravelly loamy coarse sand to extremely gravelly sand.	GP-GM, GW-GM	A-1	0	35-45	20-35	10-20	5-10	---	NP
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
472*: Broyles-----	0-12	Very fine sandy loam.	ML	A-4	0	100	95-100	85-95	60-75	---	NP
	12-60	Stratified loam to gravelly loamy sand.	SM	A-2	0	70-100	60-95	30-40	25-35	---	NP
Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
473*: Broyles-----	0-12	Very fine sandy loam.	ML	A-4	0	100	95-100	85-95	60-75	---	NP
	12-60	Stratified loam to gravelly loamy sand.	SM	A-2	0	70-100	60-95	30-40	25-35	---	NP
Sheffit-----	0-3	Silt loam-----	CL-ML, ML	A-4	0	100	95-100	80-100	65-85	25-35	5-10
	3-60	Stratified silt loam to clay.	CL, ML, MH	A-7	0	100	95-100	90-100	85-95	40-60	15-25
Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
480*: Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
481*: Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
481*: Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
483*: Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Upatad-----	0-3	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	3-15	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Birchcreek-----	0-3	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	20-40	50-70	45-65	40-65	25-50	25-35	5-15
	3-10	Very cobbly clay loam, very gravelly clay loam, very stony clay loam.	GC, GM	A-2, A-6	25-55	50-60	40-55	40-50	30-40	35-40	10-15
	10-28	Very cobbly clay, extremely gravelly clay, very stony clay.	GC	A-2, A-7	25-55	45-70	35-70	35-65	25-50	45-60	20-35
	28-32	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
484*: Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Birchcreek-----	0-3	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	20-40	50-70	45-65	40-65	25-50	25-35	5-15
	3-10	Very cobbly clay loam, very gravelly clay loam, very stony clay loam.	GC, GM	A-2, A-6	25-55	50-60	40-55	40-50	30-40	35-40	10-15
	10-28	Very cobbly clay, extremely gravelly clay, very stony clay.	GC	A-2, A-7	25-55	45-70	35-70	35-65	25-50	45-60	20-35
	28-32	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
486*: Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
486*: Upatad-----	0-3	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	3-15	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
489*: Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
McIvey-----	0-12	Very cobbly loam	GC	A-6	25-50	50-70	45-65	40-60	35-50	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-7, A-2	10-55	45-60	35-50	35-45	30-45	45-55	30-35
Birchcreek-----	0-3	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	20-40	50-70	45-65	40-65	25-50	25-35	5-15
	3-10	Very cobbly clay loam, very gravelly clay loam, very stony clay loam.	GC, GM	A-2, A-6	25-55	50-60	40-55	40-50	30-40	35-40	10-15
	10-28	Very cobbly clay, extremely gravelly clay, very stony clay.	GC	A-2, A-7	25-55	45-70	35-70	35-65	25-50	45-60	20-35
	28-32	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
490----- Kunzler	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
491*: Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
491*: Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
500*: Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
McIvey-----	0-12	Very gravelly loam.	GC	A-2	0-10	35-60	25-50	25-45	15-35	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	10-55	45-60	35-50	35-45	30-45	45-55	20-30
Hutchley-----	0-3	Very gravelly loam.	GM-GC, GM	A-4, A-2	5-15	55-65	40-50	35-45	20-40	25-35	5-10
	3-12	Very gravelly clay loam, very cobbly clay loam.	GC	A-2	10-55	50-65	30-60	25-55	20-35	35-45	15-20
	12-16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
510*: Onkeyo-----	0-8	Very gravelly silt loam.	GC	A-2, A-6	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-15	Extremely cobbly silty clay loam, very cobbly silty clay loam.	GM	A-2, A-7	35-60	55-75	20-50	20-50	15-45	40-45	10-15
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cavehill-----	0-15	Very gravelly silt loam.	GM, GM-GC	A-2	0-15	40-55	35-50	30-45	25-35	25-35	5-10
	15-27	Very gravelly loam, very cobbly loam.	GM-GC, GM	A-2, A-4	10-45	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
510*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
520*: McIvey-----	0-12	Very gravelly loam.	GC	A-2	0-10	35-60	25-50	25-45	15-35	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	10-55	45-60	35-50	35-45	30-45	45-55	20-30
Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
531*: Duffer-----	0-6	Silt loam-----	CL	A-6	0	100	100	95-100	85-95	30-35	10-15
	6-60	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	95-100	85-95	30-45	10-20
Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20
534*: Duffer-----	0-6	Silt loam-----	CL	A-6	0	100	100	95-100	85-95	30-35	10-15
	6-60	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	95-100	85-95	30-45	10-20
Duffer-----	0-6	Silt loam-----	CL-ML	A-4	0	100	100	90-100	75-90	25-30	5-10
	6-60	Silt loam, silty clay loam.	CL	A-6	0	100	100	95-100	85-95	30-40	10-20
Kolda-----	0-6	Silt loam-----	CL-ML, CL	A-4, A-6	0	100	100	85-100	70-90	25-35	5-15
	6-22	Silt loam-----	CL-ML, CL	A-4, A-6	0	100	100	85-100	65-90	25-35	5-15
	22-60	Clay, silty clay	CH, CL	A-7	0	100	100	95-100	90-100	45-60	20-30
540*: Kolda-----	0-6	Silt loam-----	CL-ML, CL	A-4, A-6	0	100	100	85-100	70-90	25-35	5-15
	6-22	Silt loam-----	CL-ML, CL	A-4, A-6	0	100	100	85-100	65-90	25-35	5-15
	22-60	Clay, silty clay	CH, CL	A-7	0	100	100	95-100	90-100	45-60	20-30

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
540*: Sheffit-----	0-3	Silt loam-----	CL-ML, ML	A-4	0	100	95-100	80-100	65-85	25-35	5-10
	3-60	Stratified silt loam to clay.	CL, ML, MH	A-7	0	100	95-100	90-100	85-95	40-60	15-25
Equis-----	0-6	Silt loam-----	ML	A-4	0	100	100	95-100	75-90	30-40	5-10
	6-30	Silty clay, clay	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	30-50	Silty clay, silty clay loam.	MH	A-7	0	100	100	95-100	95-100	50-70	15-25
	50-60	Silty clay loam, silty clay, silt loam.	MH, ML	A-7, A-6	0	100	95-100	90-100	85-95	35-70	10-25
541*: Kolda-----	0-6	Silt loam-----	CL-ML, CL	A-4, A-6	0	100	100	85-100	70-90	25-35	5-15
	6-22	Silt loam-----	CL-ML, CL	A-4, A-6	0	100	100	85-100	65-90	25-35	5-15
	22-60	Clay, silty clay	CH, CL	A-7	0	100	100	95-100	90-100	45-60	20-30
Duffer-----	0-6	Silt loam-----	CL-ML	A-4	0	100	100	90-100	75-90	25-30	5-10
	6-60	Silt loam, silty clay loam.	CL	A-6	0	100	100	95-100	85-95	30-40	10-20
542*: Devilsgait-----	0-10	Silt loam-----	CL-ML, ML	A-4	0	100	100	90-100	75-95	25-35	5-10
	10-60	Stratified silt loam to silty clay loam.	CL, ML	A-6, A-7	0	100	100	95-100	80-95	30-50	10-20
Devilsgait-----	0-10	Silt loam-----	CL-ML, ML	A-4	0	100	100	90-100	75-95	25-35	5-10
	10-60	Stratified silt loam to silty clay loam.	CL, ML	A-6, A-7	0	100	100	95-100	80-95	30-50	10-20
Duffer-----	0-6	Silt loam-----	CL-ML	A-4	0	100	100	90-100	75-90	25-30	5-10
	6-60	Silt loam, silty clay loam.	CL	A-6	0	100	100	95-100	85-95	30-40	10-20
550*: Molion-----	0-2	Very gravelly sandy loam.	GM	A-1	0-5	50-60	30-50	25-35	15-20	15-20	NP-5
	2-14	Extremely gravelly sandy loam, extremely gravelly loam, very gravelly sandy loam.	GM, GM-GC	A-2, A-1	0	50-60	20-35	15-25	10-20	20-30	NP-10
	14-25	Cemented material	---	---	---	---	---	---	---	---	---
Unsel-----	0-4	Gravelly fine sandy loam.	SC-SM	A-2	0	75-85	55-75	40-60	25-35	25-30	5-10
	4-14	Gravelly clay loam, gravelly sandy clay loam.	SC	A-6	0	75-85	55-75	45-60	35-45	35-40	15-20
	14-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM	A-2	0	60-75	50-70	35-50	20-35	20-30	5-10
	22-60	Very gravelly sand, very gravelly loamy sand, extremely gravelly sand.	GP-GM, GP	A-1	0	40-50	20-35	10-25	0-10	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
550*: Breko-----	0-5	Gravelly sandy loam.	SM	A-1, A-2	0-5	65-80	55-75	35-60	15-35	15-25	NP-5
	5-9	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam.	GC	A-2	0	35-60	25-50	15-45	10-35	30-40	10-20
	9-26	Extremely gravelly sandy clay loam.	GP-GC	A-2	0	25-40	10-25	10-20	5-10	30-40	10-20
	26-60	Stratified gravelly sandy loam to extremely gravelly loamy sand.	GP-GM	A-1	0	35-45	10-35	5-15	5-10	15-25	NP-5
552----- Molion	0-2	Very gravelly sandy loam.	GM	A-1	0-5	50-60	30-50	25-35	15-20	15-20	NP-5
	2-14	Extremely gravelly sandy loam, extremely gravelly loam, very gravelly sandy loam.	GM, GM-GC	A-2, A-1	0	50-60	20-35	15-25	10-20	20-30	NP-10
	14-25	Cemented material	---	---	---	---	---	---	---	---	---
561*: McIvey-----	0-12	Very gravelly loam.	GC	A-2	0-10	35-60	25-50	25-45	15-35	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	10-55	45-60	35-50	35-45	30-45	45-55	20-30
Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Upatad-----	0-3	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	3-15	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
564*: McIvey-----	0-12	Very gravelly loam.	GC	A-2	0-10	35-60	25-50	25-45	15-35	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	10-55	45-60	35-50	35-45	30-45	45-55	20-30
Chen-----	0-7	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	45-55	55-65	50-60	45-55	30-40	25-35	5-15
	7-17	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2	5-50	45-55	30-50	25-40	25-35	55-65	35-40
	17-21	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Suak-----	0-10	Very stony loam	GM, GM-GC	A-1, A-2	40-55	45-65	40-60	30-40	20-35	20-30	NP-10
	10-25	Extremely cobbly loam, extremely gravelly loam.	GC	A-2	30-60	25-45	20-35	15-30	10-25	30-35	10-15
	25	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
566*: McIvey-----	0-5	Gravelly loam	GC, SC	A-6	0-10	60-85	50-75	45-70	35-50	30-40	10-15
	5-12	Very gravelly loam.	GC	A-2, A-6	0-10	50-60	45-55	35-50	25-45	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	0-55	45-60	35-50	35-45	30-45	45-55	20-30
Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
566*: Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
567*: McIvey-----	0-12	Cobbly loam-----	CL	A-6	15-25	75-95	65-90	60-80	50-70	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-7, A-2	10-55	45-60	35-50	35-45	30-45	45-55	30-35
Birchcreek-----	0-3	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	20-40	50-70	45-65	40-65	25-50	25-35	5-15
	3-10	Very cobbly clay loam, very gravelly clay loam, very stony clay loam.	GC, GM	A-2, A-6	25-55	50-60	40-55	40-50	30-40	35-40	10-15
	10-28	Very cobbly clay, extremely gravelly clay, very stony clay.	GC	A-2, A-7	25-55	45-70	35-70	35-65	25-50	45-60	20-35
	28-32	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hutchley-----	0-3	Very gravelly loam.	GM-GC, GM	A-4, A-2	5-15	55-65	40-50	35-45	20-40	25-35	5-10
	3-12	Very gravelly clay loam, very cobbly clay loam.	GC	A-2	10-55	50-65	30-60	25-55	20-35	35-45	15-20
	12-16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
570*: Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
570*: Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
McConnel-----	0-3	Gravelly fine sandy loam.	GM	A-2, A-4	0	60-70	50-70	40-60	25-45	15-25	NP-5
	3-11	Loam, sandy loam, fine sandy loam.	ML, SM	A-4	0	90-100	80-100	65-80	45-60	15-25	NP-5
	11-42	Stratified very gravelly sandy loam to extremely gravelly coarse sand.	GP	A-1	0-15	25-35	10-35	5-15	0-5	---	NP
	42-60	Sandy loam-----	SM	A-2, A-4	0	95-100	85-95	55-75	25-50	15-25	NP-5
573*: Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
575*: Yody-----	0-3	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	3-16	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	16-38	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	38-60	Cemented material	---	---	---	---	---	---	---	---	---
Broyles-----	0-12	Very fine sandy loam.	ML	A-4	0	100	95-100	85-95	60-75	---	NP
	12-60	Stratified loam to gravelly loamy sand.	SM	A-2	0	70-100	60-95	30-40	25-35	---	NP
578----- Yody	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
580*: Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20
Kelk-----	0-4	Very fine sandy loam.	CL-ML	A-4	0	100	100	95-100	65-75	25-30	5-10
	4-32	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	95-100	95-100	85-95	25-35	5-15
	32-60	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	85-100	75-95	25-35	5-15
590*: Raph-----	0-4	Loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	80-90	60-70	25-35	5-15
	4-30	Loam, silt loam	CL	A-6	0	90-100	85-100	80-95	60-75	30-35	10-15
	30-42	Gravelly sandy loam.	SC-SM, GM-GC	A-2	0	55-80	50-75	35-50	20-30	25-30	5-10
	42-60	Stratified fine sandy loam to very gravelly coarse sand.	SM, GM	A-1	0	55-80	50-75	15-35	10-20	15-25	NP-5
Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
590*:											
Zimwala-----	0-13	Silt loam-----	ML	A-4	0	100	100	95-100	90-100	30-35	NP-5
	13-40	Stratified silt loam to silty clay loam.	ML	A-6, A-7	0	100	100	95-100	90-100	35-50	10-20
	40-60	Silty clay-----	ML, MH	A-7	0	100	100	100	95-100	45-60	15-25
602*:											
Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
Nyak-----	0-9	Fine sandy loam	ML	A-4	0	100	100	80-95	50-70	20-30	NP-5
	9-14	Fine sandy loam	ML	A-4	0	100	100	80-95	50-70	20-30	NP-5
	14-60	Stratified fine sandy loam to silty clay loam.	ML	A-4	0	100	100	75-95	65-85	20-30	NP-5
Raph-----	0-4	Loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	80-90	60-70	25-35	5-15
	4-30	Loam, silt loam	CL	A-6	0	90-100	85-100	80-95	60-75	30-35	10-15
	30-42	Gravelly sandy loam.	SC-SM, GM-GC	A-2	0	55-80	50-75	35-50	20-30	25-30	5-10
	42-60	Stratified fine sandy loam to very gravelly coarse sand.	SM, GM	A-1	0	55-80	50-75	15-35	10-20	15-25	NP-5
603*:											
Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-36	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
	36-60	Sandy loam-----	SM	A-4	0	80-100	75-95	60-70	35-50	20-25	NP-5
Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20
605*:											
Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
605*: Tosser-----	0-8	Loam-----	ML	A-4	0	85-100	75-100	65-90	55-80	15-25	NP-5
	8-16	Very gravelly loam.	GM	A-1, A-2	0	35-60	25-50	20-45	15-35	15-25	NP-5
	16-24	Extremely gravelly loamy sand.	GP, GP-GM	A-1	0	20-35	15-25	10-15	0-10	---	NP
	24-60	Stratified extremely gravelly loamy coarse sand to extremely gravelly sandy loam.	GP, GP-GM	A-1	0	20-35	15-25	10-15	0-10	---	NP
610*: Broyles-----	0-12	Very fine sandy loam.	ML	A-4	0	100	90-100	85-95	60-75	---	NP
	12-60	Stratified loam to gravelly loamy sand.	SM	A-2	0	70-100	60-95	30-40	25-35	---	NP
Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5
Unsel-----	0-4	Gravelly fine sandy loam.	SC-SM	A-2	0	75-85	55-75	40-60	25-35	25-30	5-10
	4-14	Gravelly clay loam, gravelly sandy clay loam.	SC	A-6	0	75-85	55-75	45-60	35-45	35-40	15-20
	14-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM	A-2	0	60-75	50-70	35-50	20-35	20-30	5-10
	22-60	Very gravelly sand, very gravelly loamy sand, extremely gravelly sand.	GP-GM, GP	A-1	0	40-50	20-35	10-25	0-10	---	NP
620*: Unsel-----	0-4	Gravelly fine sandy loam.	SC-SM	A-2	0	75-85	55-75	40-60	25-35	25-30	5-10
	4-14	Gravelly clay loam, gravelly sandy clay loam.	SC	A-6	0	75-85	55-75	45-60	35-45	35-40	15-20
	14-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM	A-2	0	60-75	50-70	35-50	20-35	20-30	5-10
	22-60	Very gravelly sand, very gravelly loamy sand, extremely gravelly sand.	GP-GM, GP	A-1	0	40-50	20-35	10-25	0-10	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches Pct	Percentage passing sieve number--				Liquid limit Pct	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In										
620*: Broyles-----	0-12	Very fine sandy loam.	ML	A-4	0	100	95-100	85-95	60-75	---	NP
	12-60	Stratified loam to gravelly loamy sand.	SM	A-2	0	70-100	60-95	30-40	25-35	---	NP
621*: Nyala-----	0-3	Sandy loam-----	SC-SM, SM	A-4	0-5	90-100	85-95	60-75	35-50	20-30	NP-10
	3-12	Sandy clay loam, clay loam.	CL	A-6, A-7	0	90-100	85-100	75-90	50-65	35-45	15-20
	12-56	Sandy loam-----	SC-SM, SM	A-4	0	90-100	85-100	55-70	35-50	20-30	NP-10
	56-60	Gravelly loamy sand, loamy sand.	SM	A-1	0-5	75-95	65-85	35-50	10-25	---	NP
Breko-----	0-5	Gravelly sandy loam.	SM	A-1, A-2	0-5	65-80	55-75	35-60	15-35	15-25	NP-5
	5-9	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam.	GC	A-2	0	35-60	25-50	15-45	10-35	30-40	10-20
	9-26	Extremely gravelly sandy clay loam.	GP-GC	A-2	0	25-40	10-25	10-20	5-10	30-40	10-20
	26-60	Stratified gravelly sandy loam to extremely gravelly loamy sand.	GP-GM	A-1	0	35-45	10-35	5-15	5-10	15-25	NP-5
Unsel-----	0-4	Gravelly fine sandy loam.	SC-SM	A-2	0	75-85	55-75	40-60	25-35	25-30	5-10
	4-14	Gravelly clay loam, gravelly sandy clay loam.	SC	A-6	0	75-85	55-75	45-60	35-45	35-40	15-20
	14-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM	A-2	0	60-75	50-70	35-50	20-35	20-30	5-10
	22-60	Very gravelly sand, very gravelly loamy sand, extremely gravelly sand.	GP-GM, GP	A-1	0	40-50	20-35	10-25	0-10	---	NP
630*: Molion-----	0-2	Very gravelly sandy loam.	GM	A-1	0-5	50-60	30-50	25-35	15-20	15-20	NP-5
	2-14	Extremely gravelly sandy loam, extremely gravelly loam, very gravelly sandy loam.	GM, GM-GC	A-2, A-1	0	50-60	20-35	15-25	10-20	20-30	NP-10
	14-25	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
630*: Haarvar-----	0-2	Gravelly clay loam.	CL	A-7	0	65-80	60-75	55-70	50-65	40-45	25-30
	2-10	Clay-----	CL, CH	A-7	0	95-100	90-100	85-95	75-85	45-60	30-45
	10-14	Weathered bedrock	---	---	---	---	---	---	---	---	---
Haarvar-----	0-2	Gravelly clay loam.	CL	A-7	0	65-80	60-75	55-70	50-65	40-45	25-30
	2-10	Clay-----	CL, CH	A-7	0	95-100	90-100	85-95	75-85	45-60	30-45
	10-14	Weathered bedrock	---	---	---	---	---	---	---	---	---
631*, 632*: Roden-----	0-2	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	2-11	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	11	Weathered bedrock	---	---	---	---	---	---	---	---	---
Haarvar-----	0-2	Gravelly clay loam.	CL	A-7	0	65-80	60-75	55-70	50-65	40-45	25-30
	2-10	Clay-----	CL, CH	A-7	0	95-100	90-100	85-95	75-85	45-60	30-45
	10-14	Weathered bedrock	---	---	---	---	---	---	---	---	---
633*: Roden-----	0-2	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	2-11	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	11	Weathered bedrock	---	---	---	---	---	---	---	---	---
Izar-----	0-3	Very gravelly loam.	GC	A-2	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	3-14	Very gravelly loam, extremely gravelly loam.	GC	A-2	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Roden-----	0-1	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	1-8	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	8-12	Weathered bedrock	---	---	---	---	---	---	---	---	---
640*: Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches Pct	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In										
640*:											
Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
642*:											
Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
Linoyer-----	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
643*:											
Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
Bylo-----	0-4	Silt loam-----	ML, CL	A-4, A-6	0	95-100	95-100	85-100	70-90	30-40	5-15
	4-60	Silt loam, silty clay loam.	ML, CL	A-6, A-7	0	95-100	95-100	90-100	85-95	35-50	10-25
Zimwala-----	0-13	Silt loam-----	ML	A-4	0	100	100	95-100	90-100	30-35	NP-5
	13-40	Stratified silt loam to silty clay loam.	ML	A-6, A-7	0	100	100	95-100	90-100	35-50	10-20
	40-60	Silty clay-----	ML, MH	A-7	0	100	100	100	95-100	45-60	15-25
645*:											
Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
Blimo-----	0-8	Gravelly loam---	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
650*: Eaglepass-----	0-1	Extremely stony loam.	GM	A-1, A-2	30-45	30-65	25-60	20-50	15-35	15-25	NP-5
	1-4	Extremely stony loam, very cobbly fine sandy loam, extremely gravelly sandy loam.	GM	A-1, A-2	25-45	30-65	25-60	20-50	10-35	15-25	NP-5
	4	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Kyler-----	0-3	Extremely cobbly loam.	GM, GM-GC	A-1, A-2	40-50	30-40	25-40	20-35	15-25	15-25	NP-10
	3-9	Very cobbly loam, very gravelly loam.	GM, GM-GC, SM, SC-SM	A-2, A-4	15-40	55-70	50-65	40-60	25-40	15-25	NP-10
	9-13	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
660*: Stewval-----	0-2	Very stony fine sandy loam.	GM-GC	A-2	15-25	45-60	40-55	30-45	10-25	20-25	5-10
	2-10	Extremely gravelly loam, very gravelly clay loam, very gravelly loam.	GC	A-2	0-25	20-55	15-45	10-35	10-30	30-40	10-20
	10-14	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
670*: Cavehill-----	0-15	Very gravelly silt loam.	GM, GM-GC	A-2	0-15	40-55	35-50	30-45	25-35	25-35	5-10
	15-27	Very gravelly loam, very cobbly loam.	GM-GC, GM	A-2, A-4	10-45	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Grink-----	0-7	Very stony loam	GM	A-1, A-4, A-2	25-50	50-75	40-65	30-60	20-50	20-25	NP-5
	7-19	Very gravelly loam, very gravelly fine sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	20-40	10-30	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
680*: Genaw-----	0-3	Silt loam-----	CL-ML	A-4	0	85-100	75-100	65-90	55-80	20-30	5-10
	3-10	Gravelly loam, gravelly clay loam.	GC, SC	A-6	0-5	60-80	55-75	45-65	35-50	25-35	10-15
	10-16	Very gravelly loam.	GM-GC	A-2	0-5	45-55	35-50	25-45	20-35	25-30	5-10
	16-20	Weathered bedrock	---	---	---	---	---	---	---	---	---
Puett-----	0-5	Gravelly loam----	GM-GC, SC-SM	A-4	0-5	65-85	55-75	50-70	35-50	20-30	5-10
	5-14	Coarse sandy loam, gravelly loam, sandy loam.	SM, ML, GM	A-1, A-2, A-4	0	55-95	50-90	30-80	15-55	---	NP
	14-18	Weathered bedrock	---	---	---	---	---	---	---	---	---
Abgese-----	0-4	Sandy loam-----	SM	A-2, A-4	0-5	80-100	75-100	50-65	30-45	15-20	NP-5
	4-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM, SC	A-2, A-4, A-6	0-5	65-80	55-75	35-50	25-45	20-40	5-20
	22-43	Very gravelly sandy loam.	GM, SM	A-1	0-5	50-60	35-50	25-35	15-20	15-20	NP-5
	43-60	Very gravelly loamy sand, very gravelly sandy loam.	GM, SM	A-1	0-5	50-60	25-50	20-30	10-15	---	NP
690*: Devilsgait-----	0-9	Silt loam-----	CL-ML, ML	A-4	0	100	100	90-100	75-95	25-35	5-10
	9-46	Stratified silt loam to silty clay loam.	CL, ML	A-6, A-7	0	100	100	95-100	80-95	30-50	10-20
	46-60	Stratified loamy fine sand to silt loam.	CL-ML, CL, SC, SC-SM	A-4, A-6	0	100	90-100	60-85	45-65	25-35	5-15
Cassiro-----	0-5	Stony loam-----	SC-SM	A-4	15-25	80-95	65-75	60-70	40-50	20-30	5-10
	5-60	Extremely gravelly clay, very gravelly clay.	GC	A-2	10-20	30-50	25-45	20-40	20-35	50-65	30-40
710----- Raph	0-4	Loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	80-90	60-70	25-35	5-15
	4-30	Loam, silt loam	CL	A-6	0	90-100	85-100	80-95	60-75	30-35	10-15
	30-42	Gravelly sandy loam.	SC-SM, GM-GC	A-2	0	55-80	50-75	35-50	20-30	25-30	5-10
	42-60	Stratified fine sandy loam to very gravelly coarse sand.	SM, GM	A-1	0	55-80	50-75	15-35	10-20	15-25	NP-5
730*: Zimwala-----	0-13	Silt loam-----	ML	A-4	0	100	100	95-100	90-100	30-35	NP-5
	13-40	Stratified silt loam to silty clay loam.	ML	A-6, A-7	0	100	100	95-100	90-100	35-50	10-20
	40-60	Silty clay-----	ML, MH	A-7	0	100	100	100	95-100	45-60	15-25

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
730*: Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20
Zimwala-----	0-13	Silt loam-----	ML	A-4	0	100	100	95-100	90-100	30-35	NP-5
	13-40	Stratified silt loam to silty clay loam.	ML	A-6, A-7	0	100	100	95-100	90-100	35-50	10-20
	40-60	Silty clay-----	ML, MH	A-7	0	100	100	100	95-100	45-60	15-25
731*: Zimwala-----	0-13	Silt loam-----	ML	A-4	0	100	100	95-100	90-100	30-35	NP-5
	13-40	Stratified silt loam to silty clay loam.	ML	A-6, A-7	0	100	100	95-100	90-100	35-50	10-20
	40-60	Silty clay-----	ML, MH	A-7	0	100	100	100	95-100	45-60	15-25
Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20
740*: Orupa-----	0-4	Clay loam-----	CL	A-7	0	100	100	70-100	70-90	40-50	20-30
	4-60	Clay loam, silty clay, clay.	CL, CH	A-7	0	100	100	80-100	80-90	40-55	20-30
Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20
741*: Orupa-----	0-4	Clay loam-----	CL	A-7	0	100	100	70-100	70-90	40-50	20-30
	4-60	Clay loam, silty clay, clay.	CL, CH	A-7	0	100	100	80-100	80-90	40-55	20-30
Orupa-----	0-4	Clay loam-----	CL	A-7	0	100	100	70-100	70-90	40-50	20-30
	4-60	Clay loam, silty clay, clay.	CL, CH	A-7	0	100	100	80-100	80-90	40-55	20-30
750*: Upatad-----	0-3	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	3-15	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
750*: Upatad-----	0-1	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	1-14	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
751*: Upatad-----	0-3	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	3-15	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
752*: Upatad-----	0-3	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	3-15	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
752*: Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
753*: Upatad-----	0-3	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	3-15	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Atlow-----	0-2	Very gravelly loam.	GC, SC	A-2, A-6	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	2-16	Very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam.	GC	A-2, A-6, A-7	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
760*: Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Upatad-----	0-3	Very gravelly silt loam.	GM, GM-GC	A-2, A-4	0	35-60	25-50	20-45	15-40	25-35	5-10
	3-15	Very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam.	GC	A-2, A-6	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
762*: Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Eoj-----	0-8	Very stony loam	GC	A-2, A-6	15-35	55-65	50-60	40-50	30-45	25-35	10-15
	8-60	Cobbly clay-----	CL, CH	A-7	10-40	85-95	80-90	75-85	65-75	45-65	20-35
Cassiro-----	0-5	Stony loam-----	SC-SM	A-4	15-25	80-95	65-75	60-70	40-50	20-30	5-10
	5-60	Extremely gravelly clay, very gravelly clay.	GC	A-2	10-20	30-50	25-45	20-40	20-35	50-65	30-40
763*: Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
763*: Pioche-----	0-3	Extremely stony loam.	GM, SM	A-2, A-4	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	3-15	Very cobbly clay, very cobbly clay loam.	GC, CL, CH	A-7	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	15-19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
McIvey-----	0-5	Gravelly loam----	GC, SC	A-6	0-10	60-85	50-75	45-70	35-50	30-40	10-15
	5-12	Very gravelly loam.	GC	A-2, A-6	0-10	50-60	45-55	35-50	25-45	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	0-55	45-60	35-50	35-45	30-45	45-55	20-30
770*: Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Birchcreek-----	0-3	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	20-40	50-70	45-65	40-65	25-50	25-35	5-15
	3-10	Very cobbly clay loam, very gravelly clay loam, very stony clay loam.	GC, GM	A-2, A-6	25-55	50-60	40-55	40-50	30-40	35-40	10-15
	10-28	Very cobbly clay, extremely gravelly clay, very stony clay.	GC	A-2, A-7	25-55	45-70	35-70	35-65	25-50	45-60	20-35
	28-32	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
774*: Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cropper-----	0-4	Very cobbly loam	GM-GC, GM	A-2, A-4	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	4-16	Extremely gravelly sandy clay loam, extremely gravelly clay loam.	GC	A-2	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rubble land-----	0-60	Fragmental material.	GP	A-1	75-90	0-10	0-5	0-5	0	---	NP
780*: Bobs-----	0-3	Very gravelly loam.	GM	A-1, A-2	0-15	40-55	35-50	30-45	20-35	20-25	NP-5
	3-14	Gravelly loam, gravelly very fine sandy loam, gravelly silt loam.	GM, SM	A-4	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	14-18	Indurated material.	---	---	---	---	---	---	---	---	---
Orr-----	0-5	Gravelly sandy loam.	SM	A-2, A-1	0-5	70-80	65-75	40-65	20-35	---	NP
	5-35	Gravelly sandy loam, gravelly sandy clay loam, loam.	SC-SM, SC	A-2, A-4, A-6	0-5	75-85	70-85	60-80	30-50	25-35	5-15
	35-60	Gravelly sandy loam, sandy clay loam.	SM, SC-SM	A-2, A-1	0-5	70-85	60-80	40-65	20-35	15-30	NP-10
Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
783----- Bobs	0-3	Very gravelly loam.	GM	A-1, A-2	0-15	40-55	35-50	30-45	20-35	20-25	NP-5
	3-14	Gravelly loam, gravelly very fine sandy loam, gravelly silt loam.	GM, SM	A-4	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	14-18	Indurated material.	---	---	---	---	---	---	---	---	---
790*: Bylo-----	0-4	Silt loam-----	ML, CL	A-4, A-6	0	95-100	95-100	85-100	70-90	30-40	5-15
	4-60	Silt loam, silty clay loam.	ML, CL	A-6, A-7	0	95-100	95-100	90-100	85-95	35-50	10-25
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
793----- Bylo	0-4	Silt loam-----	ML, CL	A-4, A-6	0	95-100	95-100	85-100	70-90	30-40	5-15
	4-60	Silt loam, silty clay loam.	ML, CL	A-6, A-7	0	95-100	95-100	90-100	85-95	35-50	10-25
800*: Broland-----	0-3	Very gravelly loam.	GM, GC, GM-GC	A-2, A-4, A-6	0-10	40-55	30-45	25-45	25-40	20-35	NP-15
	3-9	Gravelly clay loam, gravelly sandy clay loam.	SC, GC, CL	A-2, A-6, A-7	0-10	60-85	50-75	35-65	30-55	35-45	15-20
	9-16	Extremely gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam.	GC	A-2	5-25	40-60	30-55	15-35	15-25	30-40	10-15
	16-19	Extremely gravelly sandy loam, very gravelly sandy loam.	GM-GC, GM	A-1, A-2	0-25	30-60	20-50	15-30	10-20	20-30	NP-10
	19-40	Cemented material	---	---	---	---	---	---	---	---	---
	40-60	Extremely gravelly coarse sand.	GP-GM, GP	A-1	0-5	20-35	10-25	5-20	0-10	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
800*: Broland-----	0-3	Very gravelly loam.	GM, GC, GM-GC	A-2, A-4, A-6	0-10	40-55	30-45	25-45	25-40	20-35	NP-15
	3-9	Gravelly clay loam, gravelly sandy clay loam.	SC, GC, CL	A-2, A-6, A-7	0-10	60-85	50-75	35-65	30-55	35-45	15-20
	9-16	Extremely gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam.	GC	A-2	5-25	40-60	30-55	15-35	15-25	30-40	10-15
	16-19	Extremely gravelly sandy loam, very gravelly sandy loam.	GM-GC, GM	A-1, A-2	0-25	30-60	20-50	15-30	10-20	20-30	NP-10
	19-40	Cemented material	---	---	---	---	---	---	---	---	---
	40-60	Extremely gravelly coarse sand.	GP-GM, GP	A-1	0-5	20-35	10-25	5-20	0-10	---	NP
801----- Broland	0-3	Very gravelly loam.	GM, GC, GM-GC	A-2, A-4, A-6	0-10	40-55	30-45	25-45	25-40	20-35	NP-15
	3-9	Gravelly clay loam, gravelly sandy clay loam.	SC, GC, CL	A-2, A-6, A-7	0-10	60-85	50-75	35-65	30-55	35-45	15-20
	9-16	Extremely gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam.	GC	A-2	5-25	40-60	30-55	15-35	15-25	30-40	10-15
	16-19	Extremely gravelly sandy loam, very gravelly sandy loam.	GM-GC, GM	A-1, A-2	0-25	30-60	20-50	15-30	10-20	20-30	NP-10
	19-40	Cemented material	---	---	---	---	---	---	---	---	---
	40-60	Extremely gravelly coarse sand.	GP-GM, GP	A-1	0-5	20-35	10-25	5-20	0-10	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
802*: Broland-----	0-3	Very gravelly loam.	GM, GC, GM-GC	A-2, A-4, A-6	0-10	40-55	30-45	25-45	25-40	20-35	NP-15
	3-9	Gravelly clay loam, gravelly sandy clay loam.	SC, GC, CL	A-2, A-6, A-7	0-10	60-85	50-75	35-65	30-55	35-45	15-20
	9-16	Extremely gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam.	GC	A-2	5-25	40-60	30-55	15-35	15-25	30-40	10-15
	16-19	Extremely gravelly sandy loam, very gravelly sandy loam.	GM-GC, GM	A-1, A-2	0-25	30-60	20-50	15-30	10-20	20-30	NP-10
	19-40	Cemented material	---	---	---	---	---	---	---	---	---
	40-60	Extremely gravelly coarse sand.	GP-GM, GP	A-1	0-5	20-35	10-25	5-20	0-10	---	NP
Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
803*: Broland-----	0-3	Very gravelly loam.	GM, GC, GM-GC	A-2, A-4, A-6	0-10	40-55	30-45	25-45	25-40	20-35	NP-15
	3-9	Gravelly clay loam, gravelly sandy clay loam.	SC, GC, CL	A-2, A-6, A-7	0-10	60-85	50-75	35-65	30-55	35-45	15-20
	9-16	Extremely gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam.	GC	A-2	5-25	40-60	30-55	15-35	15-25	30-40	10-15
	16-19	Extremely gravelly sandy loam, very gravelly sandy loam.	GM-GC, GM	A-1, A-2	0-25	30-60	20-50	15-30	10-20	20-30	NP-10
	19-40	Cemented material	---	---	---	---	---	---	---	---	---
	40-60	Extremely gravelly coarse sand.	GP-GM, GP	A-1	0-5	20-35	10-25	5-20	0-10	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct						
803*: Broyles-----	0-12	Very fine sandy loam.	ML	A-4	0	100	95-100	85-95	60-75	---	NP
	12-60	Stratified loam to gravelly loamy sand.	SM	A-2	0	70-100	60-95	30-40	25-35	---	NP
810*: Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
Fax-----	0-3	Very cobbly coarse sandy loam.	SM, GM	A-1	25-50	50-75	45-65	20-40	10-20	15-25	NP-5
	3-12	Very gravelly sandy clay loam, very cobbly sandy clay loam.	GC	A-2, A-6	0-40	40-70	30-60	20-50	10-40	30-40	10-20
	12-22	Very gravelly sandy clay loam, very cobbly coarse sandy loam.	GC, GM-GC, SC, SC-SM	A-2	10-50	40-65	30-55	15-45	10-25	25-35	5-15
	22-48	Cemented material	---	---	---	---	---	---	---	---	---
822*: Pits.											
Dumps-----	0-60	Fragmental material.	GP	A-1	50-90	10-30	5-15	0-5	0	---	NP
823*----- Dumps	0-60	Fragmental material.	GP	A-1	50-90	10-30	5-15	0-5	0	---	NP
830*: Genaw-----	0-3	Silt loam-----	CL-ML	A-4	0	85-100	75-100	65-90	55-80	20-30	5-10
	3-10	Gravelly loam, gravelly clay loam.	GC, SC	A-6	0-5	60-80	55-75	45-65	35-50	25-35	10-15
	10-16	Very gravelly loam.	GM-GC	A-2	0-5	45-55	35-50	25-45	20-35	25-30	5-10
	16-20	Weathered bedrock	---	---	---	---	---	---	---	---	---
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
842*: Orr-----	0-5	Gravelly sandy loam.	SM	A-2, A-1	0-5	70-80	65-75	40-65	20-35	---	NP
	5-35	Gravelly sandy loam, gravelly sandy clay loam, loam.	SC-SM, SC	A-2, A-4, A-6	0-5	75-85	70-85	60-80	30-50	25-35	5-15
	35-60	Gravelly sandy loam, sandy clay loam.	SM, SC-SM	A-2, A-1	0-5	70-85	60-80	40-65	20-35	15-30	NP-10
Fax-----	0-3	Very cobbly coarse sandy loam.	SM, GM	A-1	25-50	50-75	45-65	20-40	10-20	15-25	NP-5
	3-12	Very gravelly sandy clay loam, very cobbly sandy clay loam.	GC	A-2, A-6	0-40	40-70	30-60	20-50	10-40	30-40	10-20
	12-22	Very gravelly sandy clay loam, very cobbly coarse sandy loam.	GC, GM-GC, SC, SC-SM	A-2	10-50	40-65	30-55	15-45	10-25	25-35	5-15
	22-48	Cemented material	---	---	---	---	---	---	---	---	---
850*: Onkeyo-----	0-8	Very gravelly silt loam.	GC	A-2, A-6	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-15	Extremely cobbly silty clay loam, very cobbly silty clay loam.	GM	A-2, A-7	35-60	55-75	20-50	20-50	15-45	40-45	10-15
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Adobe-----	0-5	Very gravelly silt loam.	GM	A-1, A-2	0	35-60	25-50	20-40	15-35	25-35	NP-5
	5-17	Very gravelly silt loam, very gravelly loam.	GM	A-1, A-2	0	35-60	25-50	20-40	15-35	25-35	NP-5
	17	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
851*: Grink-----	0-7	Very stony loam	GM	A-1, A-4, A-2	25-50	50-75	40-65	30-60	20-50	20-25	NP-5
	7-19	Very gravelly loam, very gravelly fine sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	20-40	10-30	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
851*: Onkeyo-----	0-8	Very gravelly silt loam.	GC	A-2, A-6	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-15	Extremely cobbly silty clay loam, very cobbly silty clay loam.	GM	A-2, A-7	35-60	55-75	20-50	20-50	15-45	40-45	10-15
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Xine-----	0-7	Very gravelly loam.	GM	A-1, A-2	0-5	35-55	30-50	25-40	20-30	15-25	NP-5
	7-35	Very cobbly loam, very cobbly sandy loam.	GM, SM	A-2, A-4, A-1	35-50	55-80	50-75	35-60	20-45	15-25	NP-5
	35-39	Weathered bedrock	---	---	---	---	---	---	---	---	---
852*: Grink-----	0-7	Very stony loam	GM	A-1, A-4, A-2	25-50	50-75	40-65	30-60	20-50	20-25	NP-5
	7-19	Very gravelly loam, very gravelly fine sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	20-40	10-30	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Onkeyo-----	0-8	Very gravelly silt loam.	GC	A-2, A-6	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-15	Extremely cobbly silty clay loam, very cobbly silty clay loam.	GM	A-2, A-7	35-60	55-75	20-50	20-50	15-45	40-45	10-15
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Halacan-----	0-8	Very gravelly loam.	GM	A-2, A-4	5-15	45-55	35-50	30-45	25-40	30-40	NP-5
	8-19	Extremely channery loam, very channery loam.	GM	A-2, A-4, A-1	40-55	30-55	20-50	15-45	10-40	30-40	NP-5
	19-23	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
870*: Amelar-----	0-7	Gravelly silt loam.	GM-GC, GC, SC-SM, SC	A-4, A-6	0-15	60-85	50-75	50-70	40-50	25-35	5-15
	7-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
Eoj-----	0-8	Very stony loam	GC	A-2, A-6	15-35	55-65	50-60	40-50	30-45	25-35	10-15
	8-60	Cobbly clay-----	CL, CH	A-7	10-40	85-95	80-90	75-85	65-75	45-65	20-35

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
870*: Amelar-----	0-7	Very gravelly loam.	GM-GC, GC	A-2, A-4, A-6	5-15	40-60	35-50	30-45	25-40	25-35	5-15
	7-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
871*: Amelar-----	0-6	Gravelly silt loam.	GM-GC, GC, SC-SM, SC	A-4, A-6	0-15	60-85	50-75	50-70	40-50	25-35	5-15
	6-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
874*: Amelar-----	0-6	Very gravelly loam.	GM-GC, GC	A-2, A-4, A-6	5-15	40-60	35-50	30-45	25-40	25-35	5-15
	6-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
875*: Amelar-----	0-6	Gravelly silt loam.	GM-GC, GC, SC-SM, SC	A-4, A-6	0-15	60-85	50-75	50-70	40-50	25-35	5-15
	6-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
Eoj-----	0-8	Very stony loam	GC	A-2, A-6	15-35	55-65	50-60	40-50	30-45	25-35	10-15
	8-60	Cobbly clay-----	CL, CH	A-7	10-40	85-95	80-90	75-85	65-75	45-65	20-35
Hardol-----	0-12	Very gravelly silt loam.	GM	A-1, A-2	10-25	40-55	35-50	25-45	20-35	25-35	NP-5
	12-33	Extremely gravelly silt loam.	GM	A-1	15-40	20-40	10-30	10-25	10-20	25-35	NP-5
	33-60	Extremely gravelly loam.	GM, GP-GM	A-1, A-2	15-40	20-40	10-30	10-25	5-20	25-35	NP-10
876*: Amelar-----	0-6	Gravelly silt loam.	GM-GC, GC, SC-SM, SC	A-4, A-6	0-15	60-85	50-75	50-70	40-50	25-35	5-15
	6-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
Xine-----	0-7	Very gravelly loam.	GM	A-1, A-2	0-5	35-55	30-50	25-40	20-30	15-25	NP-5
	7-35	Very cobbly loam, very cobbly sandy loam.	GM, SM	A-2, A-4, A-1	35-50	55-80	50-75	35-60	20-45	15-25	NP-5
	35-39	Weathered bedrock	---	---	---	---	---	---	---	---	---
Halacan-----	0-8	Very gravelly loam.	GM	A-2, A-4	5-15	45-55	35-50	30-45	25-40	30-40	NP-5
	8-19	Extremely channery loam, very channery loam.	GM	A-2, A-4, A-1	40-55	30-55	20-50	15-45	10-40	30-40	NP-5
	19-23	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
880*: Wredah-----	0-5	Gravelly sandy loam.	SC-SM	A-2	0-10	60-80	55-75	40-60	20-30	25-30	5-10
	5-17	Gravelly sandy clay loam.	GC, SC	A-2, A-6	0-10	60-80	55-75	50-65	30-45	35-40	15-20
	17-34	Very gravelly sandy loam.	GM	A-1	0-15	35-60	30-55	25-45	15-25	15-20	NP-5
	34-60	Extremely gravelly sandy loam.	GP-GM	A-1	10-30	15-30	10-25	5-15	5-10	15-20	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct						
880*: Amelar-----	0-6	Very gravelly loam.	GM-GC, GC	A-2, A-4, A-6	5-15	40-60	35-50	30-45	25-40	25-35	5-15
	6-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
Orr-----	0-5	Gravelly sandy loam.	SM	A-2, A-1	0-5	70-80	65-75	40-65	20-35	---	NP
	5-35	Gravelly sandy loam, gravelly sandy clay loam, loam.	SC-SM, SC	A-2, A-4, A-6	0-5	75-85	70-85	60-80	30-50	25-35	5-15
	35-60	Gravelly sandy loam, sandy clay loam.	SM, SC-SM	A-2, A-1	0-5	70-85	60-80	40-65	20-35	15-30	NP-10
900*: Abgese-----	0-4	Sandy loam-----	SM	A-2, A-4	0-5	80-100	75-100	50-65	30-45	15-20	NP-5
	4-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM, SC	A-2, A-4, A-6	0-5	65-80	55-75	35-50	25-45	20-40	5-20
	22-43	Very gravelly sandy loam.	GM, SM	A-1	0-5	50-60	35-50	25-35	15-20	15-20	NP-5
	43-60	Very gravelly loamy sand, very gravelly sandy loam.	GM, SM	A-1	0-5	50-60	25-50	20-30	10-15	---	NP
Roden-----	0-2	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	2-11	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	11	Weathered bedrock	---	---	---	---	---	---	---	---	---
Orr-----	0-5	Gravelly sandy loam.	SM	A-2, A-1	0-5	70-80	65-75	40-65	20-35	---	NP
	5-35	Gravelly sandy loam, gravelly sandy clay loam, loam.	SC-SM, SC	A-2, A-4, A-6	0-5	75-85	70-85	60-80	30-50	25-35	5-15
	35-60	Gravelly sandy loam, sandy clay loam.	SM, SC-SM	A-2, A-1	0-5	70-85	60-80	40-65	20-35	15-30	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
902*: Abgese-----	0-4	Sandy loam-----	SM	A-2, A-4	0-5	80-100	75-100	50-65	30-45	15-20	NP-5
	4-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM, SC	A-2, A-4, A-6	0-5	65-80	55-75	35-50	25-45	20-40	5-20
	22-43	Very gravelly sandy loam.	GM, SM	A-1	0-5	50-60	35-50	25-35	15-20	15-20	NP-5
	43-60	Very gravelly loamy sand, very gravelly sandy loam.	GM, SM	A-1	0-5	50-60	25-50	20-30	10-15	---	NP
Risley-----	0-3	Clay loam-----	CL	A-6	0-5	90-100	85-100	70-90	60-80	35-40	15-20
	3-29	Clay loam, clay	CL, CH	A-7	0-5	90-100	85-100	75-90	65-80	40-60	20-35
	29	Weathered bedrock	---	---	---	---	---	---	---	---	---
Roden-----	0-1	Very gravelly clay loam.	GC	A-2, A-6, A-7	0-10	40-65	35-55	25-45	20-40	35-45	15-25
	1-8	Very gravelly clay, very gravelly silty clay.	GC	A-2, A-7	0-10	40-65	35-55	30-50	25-45	40-55	25-35
	8-12	Weathered bedrock	---	---	---	---	---	---	---	---	---
911*: Devilsgait-----	0-10	Silt loam-----	CL-ML, ML	A-4	0	100	100	90-95	65-80	20-30	NP-10
	10-60	Stratified silt loam to silty clay loam.	CL, ML	A-6, A-7	0	100	100	95-100	80-95	30-50	10-20
Duffer-----	0-6	Silt loam-----	CL	A-6	0	100	100	95-100	85-95	30-35	10-15
	6-60	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	95-100	85-95	30-45	10-20
Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
913----- Devilsgait	0-10	Silt loam-----	CL-ML, ML	A-4	0	100	100	90-95	65-80	20-30	NP-10
	10-60	Stratified silt loam to silty clay loam.	CL, ML	A-6, A-7	0	100	100	95-100	80-95	30-50	10-20
920*: Abgese-----	0-4	Sandy loam-----	SM	A-2, A-4	0-5	80-100	75-100	50-65	30-45	15-20	NP-5
	4-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM, SC	A-2, A-4, A-6	0-5	65-80	55-75	35-50	25-45	20-40	5-20
	22-43	Very gravelly sandy loam.	GM, SM	A-1	0-5	50-60	35-50	25-35	15-20	15-20	NP-5
	43-60	Very gravelly loamy sand, very gravelly sandy loam.	GM, SM	A-1	0-5	50-60	25-50	20-30	10-15	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
920*: Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---
930----- Tosser	0-8	Loam-----	ML	A-4	0	85-100	75-100	65-90	55-80	15-25	NP-5
	8-16	Very gravelly loam.	GM	A-1, A-2	0	35-60	25-50	20-45	15-35	15-25	NP-5
	16-24	Extremely gravelly loamy sand.	GP, GP-GM	A-1	0	20-35	15-25	10-15	0-10	---	NP
	24-60	Stratified extremely gravelly loamy coarse sand to extremely gravelly sandy loam.	GP, GP-GM	A-1	0	20-35	15-25	10-15	0-10	---	NP
940*: Nyak-----	0-9	Fine sandy loam	ML	A-4	0	100	100	80-95	50-70	20-30	NP-5
	9-14	Fine sandy loam	ML	A-4	0	100	100	80-95	50-70	20-30	NP-5
	14-60	Stratified fine sandy loam to silty clay loam.	ML	A-4	0	100	100	75-95	65-85	20-30	NP-5
Heist-----	0-8	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	8-40	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	40-60	Very fine sand---	SM	A-2	0	100	85-100	50-80	25-35	---	NP
951*: Nyak-----	0-9	Clay loam-----	CL	A-6, A-7	0	100	100	75-95	65-90	35-45	15-20
	9-14	Fine sandy loam	ML	A-4	0	100	100	80-95	50-70	20-30	NP-5
	14-60	Stratified fine sandy loam to silty clay loam.	ML	A-4	0	100	100	75-95	65-85	20-30	NP-5
Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20
Pern-----	0-14	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
	14-20	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
	20-60	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
960*:											
Doten-----	0-5	Silty clay-----	CH, MH	A-7	0	100	100	95-100	85-100	50-60	20-30
	5-80	Silty clay, clay	CH, MH	A-7	0	100	100	95-100	85-100	50-60	20-30
Bylo-----	0-4	Silt loam-----	ML, CL	A-4, A-6	0	95-100	95-100	85-100	70-90	30-40	5-15
	4-60	Silt loam, silty clay loam.	ML, CL	A-6, A-7	0	95-100	95-100	90-100	85-95	35-50	10-25
Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5
970*:											
Doten-----	0-5	Silty clay-----	CH, MH	A-7	0	100	100	95-100	85-100	50-60	20-30
	5-80	Silty clay, clay	CH, MH	A-7	0	100	100	95-100	85-100	50-60	20-30
Doten-----	0-5	Silty clay-----	CH, MH	A-7	0	100	100	95-100	85-100	50-60	20-30
	5-80	Silty clay, clay	CH, MH	A-7	0	100	100	95-100	85-100	50-60	20-30
981*:											
Brako-----	0-5	Gravelly sandy loam.	SM	A-1, A-2	0-5	65-80	55-75	35-60	15-35	15-25	NP-5
	5-9	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam.	GC	A-2	0	35-60	25-50	15-45	10-35	30-40	10-20
	9-26	Extremely gravelly sandy clay loam.	GP-GC	A-2	0	25-40	10-25	10-20	5-10	30-40	10-20
	26-60	Stratified gravelly sandy loam to extremely gravelly loamy sand.	GP-GM	A-1	0	35-45	10-35	5-15	5-10	15-25	NP-5
Armespan-----	0-1	Very gravelly sandy loam.	GM	A-1	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	1-4	Sandy loam, gravelly sandy loam, gravelly loam.	SM	A-1, A-2	0-5	80-95	65-90	45-65	20-35	20-25	NP-5
	4-10	Gravelly sandy loam, gravelly loam.	SM, GM	A-2, A-4	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	10-36	Very gravelly sandy loam, very gravelly coarse sandy loam.	GM	A-1	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	36-60	Very gravelly loamy coarse sand, very gravelly loamy sand.	SM, SP-SM, GM, GP-GM	A-1	0-10	30-60	25-50	10-35	5-15	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
982*: Breko-----	0-5	Gravelly sandy loam.	SM	A-1, A-2	0-5	65-80	55-75	35-60	15-35	15-25	NP-5
	5-9	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam.	GC	A-2	0	35-60	25-50	15-45	10-35	30-40	10-20
	9-26	Extremely gravelly sandy clay loam.	GP-GC	A-2	0	25-40	10-25	10-20	5-10	30-40	10-20
	26-60	Stratified gravelly sandy loam to extremely gravelly loamy sand.	GP-GM	A-1	0	35-45	10-35	5-15	5-10	15-25	NP-5
Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
990*: Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
Pern-----	0-14	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
	14-20	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
	20-60	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
991*: Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
991*: Zerk-----	0-3	Gravelly loam----	SM	A-4	0	70-85	60-75	45-60	35-50	20-25	NP-5
	3-12	Gravelly loam, very gravelly loam.	SM, GM	A-2, A-4, A-1	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	12-60	Stratified extremely gravelly loamy sand to extremely gravelly coarse sand.	GP-GM, GP	A-1	15-30	25-40	15-30	5-15	0-10	---	NP
992*: Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
Linoyer-----	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
1000*: Linoyer-----	0-4	Silt loam-----	CL-ML, ML	A-4	0	100	100	85-100	70-90	15-25	NP-10
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
Unsel-----	0-4	Gravelly fine sandy loam.	SC-SM	A-2	0	75-85	55-75	40-60	25-35	25-30	5-10
	4-14	Gravelly clay loam, gravelly sandy clay loam.	SC	A-6	0	75-85	55-75	45-60	35-45	35-40	15-20
	14-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM	A-2	0	60-75	50-70	35-50	20-35	20-30	5-10
	22-60	Very gravelly sand, very gravelly loamy sand, extremely gravelly sand.	GP-GM, GP	A-1	0	40-50	20-35	10-25	0-10	---	NP
1010*: Hunnton-----	0-4	Silt loam-----	ML	A-4	0	95-100	85-100	75-100	60-75	20-35	NP-10
	4-10	Loam, clay loam, silty clay loam.	CL	A-6	0	95-100	90-100	75-95	60-90	30-35	10-15
	10-35	Clay, gravelly clay.	CH	A-7	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	35-40	Indurated material.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1010*: Chiara-----	0-4	Silt loam-----	ML	A-4	0	95-100	90-100	85-95	70-80	25-35	NP-5
	4-19	Very fine sandy loam, loam, silt loam.	ML	A-4	0	95-100	90-100	80-95	70-80	25-35	NP-5
	19-23	Indurated material.	---	---	---	---	---	---	---	---	---
1012*: Hunnton-----	0-4	Silt loam-----	ML	A-4	0	95-100	85-100	75-100	60-75	20-35	NP-10
	4-10	Loam, clay loam, silty clay loam.	CL	A-6	0	95-100	90-100	75-95	60-90	30-35	10-15
	10-35	Clay, gravelly clay.	CH	A-7	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	35-40	Indurated material.	---	---	---	---	---	---	---	---	---
Wieland-----	0-8	Silt loam-----	CL-ML	A-4	0	95-100	90-100	85-95	75-85	20-30	5-10
	8-17	Gravelly clay, clay.	CH, SC	A-7	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	17-30	Gravelly sandy clay loam, gravelly clay loam.	GC, SC	A-6, A-2	0-5	60-85	50-70	40-70	25-50	35-40	15-20
	30-60	Loam, gravelly loam, gravelly sandy loam.	CL-ML, SC-SM	A-4, A-2	0-5	65-95	55-90	40-85	25-70	20-30	5-10
Kelk-----	0-4	Very fine sandy loam.	CL-ML	A-4	0	100	100	95-100	65-75	25-30	5-10
	4-32	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	95-100	95-100	85-95	25-35	5-15
	32-60	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	85-100	75-95	25-35	5-15
1020*: Sonoma-----	0-10	Silt loam-----	CL	A-6	0	100	100	100	95-100	30-35	10-15
	10-60	Stratified silt loam to silty clay loam.	ML, CL	A-6, A-7	0	100	100	100	95-100	35-50	10-25
Kelk-----	0-4	Very fine sandy loam.	CL-ML	A-4	0	100	100	90-95	65-75	25-30	5-10
	4-32	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	95-100	95-100	85-95	25-35	5-15
	32-60	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	90-100	80-95	25-35	5-15
1030- Chiara-----	0-4	Silt loam-----	ML	A-4	0	95-100	90-100	85-95	70-80	25-35	NP-5
	4-19	Very fine sandy loam, loam, silt loam.	ML	A-4	0	95-100	90-100	80-95	70-80	25-35	NP-5
	19-23	Indurated material.	---	---	---	---	---	---	---	---	---
1032*: Chiara-----	0-4	Silt loam-----	ML	A-4	0	95-100	90-100	85-95	70-80	25-35	NP-5
	4-19	Very fine sandy loam, loam, silt loam.	ML	A-4	0	95-100	90-100	80-95	70-80	25-35	NP-5
	19-23	Indurated material.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1032*: Kelk-----	0-4	Very fine sandy loam.	CL-ML	A-4	0	100	100	95-100	65-75	25-30	5-10
	4-32	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	95-100	95-100	85-95	25-35	5-15
	32-60	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	85-100	75-95	25-35	5-15
Kelk-----	0-4	Very fine sandy loam.	CL-ML	A-4	0	100	100	90-95	65-75	25-30	5-10
	4-32	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	95-100	95-100	85-95	25-35	5-15
	32-60	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	90-100	90-100	80-95	25-35	5-15
1050*: Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
Dewar-----	0-3	Gravelly silt loam.	GC, CL, SC	A-6	0-5	60-90	55-80	45-80	35-70	25-35	10-15
	3-12	Gravelly silty clay loam, gravelly clay loam.	GC, CL	A-6, A-7	0-10	65-90	60-80	55-80	45-75	35-45	15-20
	12-18	Gravelly silt loam.	GM-GC, GC, CL-ML, CL	A-4, A-6	0-10	65-90	60-80	55-80	40-70	25-35	5-15
	18-60	Indurated material.	---	---	---	---	---	---	---	---	---
1081*: Bobs-----	0-3	Very gravelly loam.	GM	A-1, A-2	0-15	40-55	35-50	30-45	20-35	20-25	NP-5
	3-14	Gravelly loam, gravelly very fine sandy loam, gravelly silt loam.	GM, SM	A-4	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	14-18	Indurated material.	---	---	---	---	---	---	---	---	---
Fax-----	0-3	Very cobbly coarse sandy loam.	SM, GM	A-1	25-50	50-75	45-65	20-40	10-20	15-25	NP-5
	3-12	Very gravelly sandy clay loam, very cobbly sandy clay loam.	GC	A-2, A-6	0-40	40-70	30-60	20-50	10-40	30-40	10-20
	12-22	Very gravelly sandy clay loam, very cobbly coarse sandy loam.	GC, GM-GC, SC, SC-SM	A-2	10-50	40-65	30-55	15-45	10-25	25-35	5-15
	22-48	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1081*: Parisa-----	0-4	Gravelly loam----	GM, SM	A-2, A-4	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	4-26	Very gravelly loam, very gravelly sandy loam.	GM, SM	A-1, A-2	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	26-47	Indurated material.	---	---	---	---	---	---	---	---	---
	47-60	Extremely gravelly coarse sandy loam.	GP, GP-GM	A-1	0-15	15-35	10-25	5-15	0-10	---	NP
1090*: Fax-----	0-3	Very cobbly coarse sandy loam.	SM, GM	A-1	25-50	50-75	45-65	20-40	10-20	15-25	NP-5
	3-12	Very gravelly sandy clay loam, very cobbly sandy clay loam.	GC	A-2, A-6	0-40	40-70	30-60	20-50	10-40	30-40	10-20
	12-22	Very gravelly sandy clay loam, very cobbly coarse sandy loam.	GC, GM-GC, SC, SC-SM	A-2	10-50	40-65	30-55	15-45	10-25	25-35	5-15
	22-48	Cemented material	---	---	---	---	---	---	---	---	---
Hunnton-----	0-4	Silt loam-----	ML	A-4	0	95-100	85-100	75-100	60-75	20-35	NP-10
	4-10	Loam, clay loam, silty clay loam.	CL	A-6	0	95-100	90-100	75-95	60-90	30-35	10-15
	10-35	Clay, gravelly clay.	CH	A-7	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	35-40	Indurated material.	---	---	---	---	---	---	---	---	---
Cassiro-----	0-5	Stony loam-----	SC-SM	A-4	15-25	80-95	65-75	60-70	40-50	20-30	5-10
	5-60	Extremely gravelly clay, very gravelly clay.	GC	A-2	10-20	30-50	25-45	20-40	20-35	50-65	30-40
1120*: Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
Sycomat-----	0-4	Sandy loam-----	SM, ML	A-4	0	85-100	80-100	55-75	40-60	15-25	NP-5
	4-15	Sandy loam-----	SM, ML	A-4	0	85-100	80-100	55-75	40-60	15-25	NP-5
	15-44	Sandy loam-----	SM, ML	A-4	0	85-100	80-100	55-75	40-60	15-25	NP-5
	44-60	Stratified sandy loam to sand.	SM	A-2, A-4	0	90-100	85-100	40-65	30-50	---	NP
1122*: Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1122*: Pern-----	0-14	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
	14-20	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
	20-60	Silt loam-----	CL	A-6	0	100	90-100	90-100	80-95	25-35	10-15
1130*: Duffer-----	0-6	Silt loam-----	CL-ML	A-4	0	100	100	90-100	75-90	25-30	5-10
	6-60	Silt loam, silty clay loam.	CL	A-6	0	100	100	95-100	85-95	30-40	10-20
Duffer-----	0-6	Silt loam-----	CL	A-6	0	100	100	95-100	85-95	30-35	10-15
	6-60	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	95-100	85-95	30-45	10-20
Equis-----	0-6	Silty clay-----	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	6-30	Silty clay, clay	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	30-50	Silty clay, silty clay loam.	MH	A-7	0	100	100	95-100	95-100	50-70	15-25
	50-60	Silty clay loam, silty clay, silt loam.	MH, ML	A-7, A-6	0	100	95-100	90-100	85-95	35-70	10-25
1131*: Duffer-----	0-6	Silt loam-----	CL-ML	A-4	0	100	100	90-100	75-90	25-30	5-10
	6-60	Silt loam, silty clay loam.	CL	A-6	0	100	100	95-100	85-95	30-40	10-20
Devilsgait-----	0-10	Silt loam-----	CL-ML, ML	A-4	0	100	100	90-100	75-95	25-35	5-10
	10-60	Stratified silt loam to silty clay loam.	CL, ML	A-6, A-7	0	100	100	95-100	80-95	30-50	10-20
Duffer-----	0-6	Silt loam-----	CL	A-6	0	100	100	95-100	85-95	30-35	10-15
	6-60	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	95-100	85-95	30-45	10-20
1132----- Duffer	0-6	Silt loam-----	CL	A-6	0	100	100	95-100	85-95	30-35	10-15
	6-60	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	95-100	85-95	30-45	10-20
1141*: Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1141*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
1151*: Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	1-12	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	1-12	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
1152*: Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	1-12	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Zimbob-----	0-1	Very gravelly loam.	GM	A-1, A-2	0-5	50-60	30-50	25-40	15-30	20-25	NP-5
	1-7	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-5	50-60	30-50	25-40	20-35	20-25	NP-5
	7	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1152*: Eaglepass-----	0-1	Extremely stony loam.	GM	A-1, A-2	30-45	30-65	25-60	20-50	15-35	15-25	NP-5
	1-4	Extremely stony loam, very cobbly fine sandy loam, extremely gravelly sandy loam.	GM	A-1, A-2	25-45	30-65	25-60	20-50	10-35	15-25	NP-5
	4	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1171*: Haunchee-----	0-5	Very gravelly loam.	GM-GC	A-2	0-10	35-60	25-50	20-35	15-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardol-----	0-12	Very gravelly silt loam.	GM	A-1, A-2	10-25	40-55	35-50	25-45	20-35	25-35	NP-5
	12-33	Extremely gravelly silt loam.	GM	A-1	15-40	20-40	10-30	10-25	10-20	25-35	NP-5
	33-60	Extremely gravelly loam.	GM, GP-GM	A-1, A-2	15-40	20-40	10-30	10-25	5-20	25-35	NP-10
Halacan-----	0-8	Very gravelly loam.	GM	A-2, A-4	5-15	45-55	35-50	30-45	25-40	30-40	NP-5
	8-19	Extremely channery loam, very channery loam.	GM	A-2, A-4, A-1	40-55	30-55	20-50	15-45	10-40	30-40	NP-5
	19-23	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1173*: Haunchee-----	0-5	Very cobbly loam	GM-GC	A-2	35-40	50-60	40-55	30-40	20-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardol-----	0-12	Very gravelly silt loam.	GM	A-1, A-2	10-25	40-55	35-50	25-45	20-35	25-35	NP-5
	12-33	Extremely gravelly silt loam.	GM	A-1	15-40	20-40	10-30	10-25	10-20	25-35	NP-5
	33-60	Extremely gravelly loam.	GM, GP-GM	A-1, A-2	15-40	20-40	10-30	10-25	5-20	25-35	NP-10
Rock outcrop.											

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1174*: Haunchee-----	0-5	Very cobbly loam	GM-GC	A-2	35-40	50-60	40-55	30-40	20-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Wardbay-----	0-18	Very gravelly loam.	GM, GM-GC	A-2	0-15	35-60	25-50	20-40	15-35	25-35	5-10
	18-45	Extremely cobbly silt loam, extremely gravelly silt loam.	GM, GM-GC	A-2	40-55	20-50	10-40	10-35	10-30	25-35	5-10
	45	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardzem-----	0-1	Channery loam----	SC-SM	A-4	0-25	70-80	65-75	50-70	35-50	20-30	5-10
	1-21	Very channery loam, extremely channery loam, extremely channery clay loam.	GC	A-2	10-25	20-50	15-45	10-40	10-35	30-40	10-15
	21-52	Weathered bedrock	---	---	---	---	---	---	---	---	---
	52	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1175*: Haunchee-----	0-5	Very cobbly loam	GM-GC	A-2	35-40	50-60	40-55	30-40	20-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardol-----	0-12	Very gravelly silt loam.	GM	A-1, A-2	10-25	40-55	35-50	25-45	20-35	25-35	NP-5
	12-33	Extremely gravelly silt loam.	GM	A-1	15-40	20-40	10-30	10-25	10-20	25-35	NP-5
	33-60	Extremely gravelly loam.	GM, GP-GM	A-1, A-2	15-40	20-40	10-30	10-25	5-20	25-35	NP-10
Hardzem-----	0-1	Channery loam----	SC-SM	A-4	0-25	70-80	65-75	50-70	35-50	20-30	5-10
	1-21	Very channery loam, extremely channery loam, extremely channery clay loam.	GC	A-2	10-25	20-50	15-45	10-40	10-35	30-40	10-15
	21-52	Weathered bedrock	---	---	---	---	---	---	---	---	---
	52	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1176*:											
Haunchee-----	0-5	Very cobbly loam	GM-GC	A-2	35-40	50-60	40-55	30-40	20-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardzem-----	0-1	Channery loam----	SC-SM	A-4	0-25	70-80	65-75	50-70	35-50	20-30	5-10
	1-21	Very channery loam, extremely channery loam, extremely channery clay loam.	GC	A-2	10-25	20-50	15-45	10-40	10-35	30-40	10-15
	21-52	Weathered bedrock	---	---	---	---	---	---	---	---	---
	52	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
1178*:											
Haunchee-----	0-5	Very cobbly loam	GM-GC	A-2	35-40	50-60	40-55	30-40	20-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardol-----	0-12	Very gravelly silt loam.	GM	A-1, A-2	10-25	40-55	35-50	25-45	20-35	25-35	NP-5
	12-33	Extremely gravelly silt loam.	GM	A-1	15-40	20-40	10-30	10-25	10-20	25-35	NP-5
	33-60	Extremely gravelly loam.	GM, GP-GM	A-1, A-2	15-40	20-40	10-30	10-25	5-20	25-35	NP-10
Xine-----	0-10	Very gravelly loam.	GM	A-1, A-2	0-5	35-55	30-50	25-40	20-30	15-25	NP-5
	10-35	Very cobbly loam, very cobbly sandy loam.	GM, SM	A-2, A-4, A-1	35-50	55-80	50-75	35-60	20-45	15-25	NP-5
	35-39	Weathered bedrock	---	---	---	---	---	---	---	---	---
1180*:											
Eoj-----	0-8	Very stony loam	GC	A-2, A-6	15-35	55-65	50-60	40-50	30-45	25-35	10-15
	8-60	Cobbly clay-----	CL, CH	A-7	10-40	85-95	80-90	75-85	65-75	45-65	20-35
Eoj-----	0-8	Very stony loam	GC	A-2, A-6	15-35	55-65	50-60	40-50	30-45	25-35	10-15
	8-60	Cobbly clay-----	CL, CH	A-7	10-40	85-95	80-90	75-85	65-75	45-65	20-35

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1180*: McIvey-----	0-5	Gravelly loam----	GC, SC	A-6	0-10	60-85	50-75	45-70	35-50	30-40	10-15
	5-12	Very gravelly loam.	GC	A-2, A-6	0-10	50-60	45-55	35-50	25-45	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	0-55	45-60	35-50	35-45	30-45	45-55	20-30
1190*: Katelana-----	0-2	Silt loam-----	CL-ML	A-4	0	100	100	65-85	60-80	20-30	5-10
	2-19	Silt loam-----	CL	A-6	0	100	100	70-90	65-85	25-35	10-15
	19-32	Stratified silt loam to silty clay loam.	CL	A-6	0	100	100	95-100	75-85	25-40	10-20
	32-62	Stratified silty clay loam to clay loam.	CL	A-7	0	100	100	95-100	85-95	40-50	15-25
	62-75	Silty clay, clay	MH, ML	A-7	0	100	100	95-100	85-95	45-55	15-25
Boofuss-----	0-5	Silty clay-----	CH, CL	A-7	0	100	100	90-100	85-95	45-60	25-35
	5-20	Stratified silty clay loam to clay.	CH, CL	A-7	0	100	100	70-95	65-90	40-60	20-35
	20-60	Stratified fine sandy loam to silt loam.	SM, ML	A-2, A-4	0	95-100	90-100	65-85	30-60	15-25	NP-5
1201*: Biken-----	0-5	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	5-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30-34	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Orr-----	0-5	Gravelly sandy loam.	SM	A-2, A-1	0-5	70-80	65-75	40-65	20-35	---	NP
	5-35	Gravelly sandy loam, gravelly sandy clay loam, loam.	SC-SM, SC	A-2, A-4, A-6	0-5	75-85	70-85	60-80	30-50	25-35	5-15
	35-60	Gravelly sandy loam, sandy clay loam.	SM, SC-SM	A-2, A-1	0-5	70-85	60-80	40-65	20-35	15-30	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1202*: Biken-----	0-5	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	5-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30-34	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Biken-----	0-9	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	9-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
1221*: Cavehill-----	0-15	Cobbly loam-----	SC-SM, SM	A-4	10-20	70-90	60-85	45-60	35-50	25-35	5-10
	15-27	Very stony loam, very cobbly loam, very gravelly loam.	GM-GC, GM	A-2, A-4	5-40	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Grink-----	0-7	Very stony loam	GM	A-1, A-4, A-2	25-50	50-75	40-65	30-60	20-50	20-25	NP-5
	7-19	Very gravelly loam, very gravelly fine sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	20-40	10-30	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1221*: Onkeyo-----	0-8	Very gravelly silt loam.	GC	A-2, A-6	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-15	Extremely cobbly silty clay loam, very cobbly silty clay loam.	GM	A-2, A-7	35-60	55-75	20-50	20-50	15-45	40-45	10-15
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1222*: Grink-----	0-7	Stony loam-----	ML	A-4	15-40	75-100	65-90	55-80	50-70	20-25	NP-5
	7-19	Very gravelly loam, very gravelly fine sandy loam.	GM	A-1, A-2	0-15	40-60	30-50	20-40	10-30	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Amelar-----	0-6	Gravelly silt loam.	GM-GC, GC, SC-SM, SC	A-4, A-6	0-15	60-85	50-75	50-70	40-50	25-35	5-15
	6-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
Xine-----	0-7	Very gravelly loam.	GM	A-1, A-2	0-5	35-55	30-50	25-40	20-30	15-25	NP-5
	7-35	Very cobbly loam, very cobbly sandy loam.	GM, SM	A-2, A-4, A-1	35-50	55-80	50-75	35-60	20-45	15-25	NP-5
	35-39	Weathered bedrock	---	---	---	---	---	---	---	---	---
1230*: Garfan-----	0-8	Very gravelly loam.	GC, GM-GC	A-2, A-4, A-6	10-25	40-65	30-55	25-50	20-40	25-35	5-15
	8-27	Extremely cobbly clay, extremely cobbly clay loam.	GC, GP-GC	A-2	25-50	20-45	10-35	10-25	5-15	40-50	20-30
	27-60	Extremely gravelly clay, extremely gravelly clay loam.	GC	A-2	5-25	25-40	20-35	15-30	10-25	40-50	20-30
McIvey-----	0-5	Gravelly loam-----	GC, SC	A-6	0-10	60-85	50-75	45-70	35-50	30-40	10-15
	5-12	Very gravelly loam.	GC	A-2, A-6	0-10	50-60	45-55	35-50	25-45	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	0-55	45-60	35-50	35-45	30-45	45-55	20-30

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct						
1230*: Hutchley-----	0-3	Very gravelly loam.	GM-GC, GM	A-4, A-2	5-15	55-65	40-50	35-45	20-40	25-35	5-10
	3-12	Very gravelly clay loam, very cobbly clay loam.	GC	A-2	10-55	50-65	30-60	25-55	20-35	35-45	15-20
	12-16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1240*: Biken-----	0-9	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	9-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Biken-----	0-9	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	9-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Biken-----	0-3	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	3-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30-34	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1242*: Biken-----	0-9	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	9-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1242*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Barfan-----	0-2	Gravelly sandy loam.	SM	A-2, A-1, A-5	0	60-85	50-75	30-65	15-45	40-60	NP-5
	2-11	Sandy loam, gravelly sandy loam.	SM	A-2, A-5, A-1	0	80-100	70-100	45-70	20-40	40-60	NP-5
	11	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1243*: Biken-----	0-9	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	9-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Breko-----	0-5	Gravelly sandy loam.	SM	A-1, A-2	0-5	65-80	55-75	35-60	15-35	15-25	NP-5
	5-9	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam.	GC	A-2	0	35-60	25-50	15-45	10-35	30-40	10-20
	9-26	Extremely gravelly sandy clay loam.	GP-GC	A-2	0	25-40	10-25	10-20	5-10	30-40	10-20
	26-60	Stratified gravelly sandy loam to extremely gravelly loamy sand.	GP-GM	A-1	0	35-45	10-35	5-15	5-10	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1245*: Biken-----	0-9	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	9-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Biken-----	0-3	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	3-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30-34	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
1251*: Alley-----	0-4	Gravelly sandy loam.	SM	A-1, A-2	0-5	75-85	65-75	40-50	20-30	---	NP
	4-16	Gravelly clay loam, gravelly loam.	SC, GC	A-6	0-10	65-80	55-75	50-65	35-50	30-40	10-15
	16-50	Gravelly loam, gravelly sandy loam.	GM, GM-GC, SM, SC-SM	A-2	0-10	60-70	50-60	35-45	25-35	20-30	NP-10
	50-60	Very gravelly sandy loam.	GM	A-1	0-10	30-55	25-50	15-40	10-25	---	NP
Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1251*: Cowgil-----	0-4	Very gravelly sandy loam.	GM, GM-GC	A-1, A-2	0-5	40-55	30-45	15-30	10-25	15-25	NP-10
	4-21	Very gravelly sandy clay loam.	GC	A-2	10-25	50-65	40-55	35-50	20-30	30-40	10-20
	21-61	Very cobbly loamy sand, very gravelly loamy sand, extremely gravelly sand.	GM, GP-GM, GP	A-1	10-35	35-55	25-50	15-30	0-15	---	NP
1260*: Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Urmafot-----	0-9	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	9-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
1270*: Boofuss-----	0-5	Silty clay-----	CH, CL	A-7	0	100	100	90-100	85-95	45-60	25-35
	5-20	Stratified silty clay loam to clay.	CH, CL	A-7	0	100	100	70-95	65-90	40-60	20-35
	20-60	Stratified fine sandy loam to silt loam.	SM, ML	A-2, A-4	0	95-100	90-100	65-85	30-60	15-25	NP-5
Boofuss-----	0-5	Silty clay-----	CH, CL	A-7	0	100	100	90-100	85-95	45-60	25-35
	5-20	Stratified silty clay loam to clay.	CH, CL	A-7	0	100	100	70-95	65-90	40-60	20-35
	20-60	Stratified fine sandy loam to silt loam.	SM, ML	A-2, A-4	0	95-100	90-100	65-85	30-60	15-25	NP-5
Equis-----	0-6	Silty clay-----	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	6-30	Silty clay, clay	MH	A-7	0	100	100	95-100	95-100	60-80	20-30
	30-50	Silty clay, silty clay loam.	MH	A-7	0	100	100	95-100	95-100	50-70	15-25
	50-60	Silty clay loam, silty clay, silt loam.	MH, ML	A-7, A-6	0	100	95-100	90-100	85-95	35-70	10-25

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct						
1280*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Molion-----	0-2	Very gravelly sandy loam.	GM	A-1	0-5	50-60	30-50	25-35	15-20	15-20	NP-5
	2-14	Extremely gravelly sandy loam, extremely gravelly loam, very gravelly sandy loam.	GM, GM-GC	A-2, A-1	0	50-60	20-35	15-25	10-20	20-30	NP-10
	14-25	Cemented material	---	---	---	---	---	---	---	---	---
Broland-----	0-3	Very gravelly loam.	GM, GC, GM-GC	A-2, A-4, A-6	0-10	40-55	30-45	25-45	25-40	20-35	NP-15
	3-9	Gravelly clay loam, gravelly sandy clay loam.	SC, GC, CL	A-2, A-6, A-7	0-10	60-85	50-75	35-65	30-55	35-45	15-20
	9-16	Extremely gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam.	GC	A-2	5-25	40-60	30-55	15-35	15-25	30-40	10-15
	16-19	Extremely gravelly sandy loam, very gravelly sandy loam.	GM-GC, GM	A-1, A-2	0-25	30-60	20-50	15-30	10-20	20-30	NP-10
	19-40	Cemented material	---	---	---	---	---	---	---	---	---
	40-60	Extremely gravelly coarse sand.	GP-GM, GP	A-1	0-5	20-35	10-25	5-20	0-10	---	NP
1282*: Urmafot-----	0-8	Very gravelly loam.	GM	A-1, A-2	0	30-60	25-50	20-45	15-35	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct						
1282*: Urmafot-----	0-8	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
1283*: Urmafot-----	0-8	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	8-14	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	14-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Fax-----	0-3	Very cobbly coarse sandy loam.	SM, GM	A-1	25-50	50-75	45-65	20-40	10-20	15-25	NP-5
	3-12	Very gravelly sandy clay loam, very cobbly sandy clay loam.	GC	A-2, A-6	0-40	40-70	30-60	20-50	10-40	30-40	10-20
	12-22	Very gravelly sandy clay loam, very cobbly coarse sandy loam.	GC, GM-GC, SC, SC-SM	A-2	10-50	40-65	30-55	15-45	10-25	25-35	5-15
	22-48	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1287*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Izar-----	0-3	Very gravelly loam.	GC	A-2	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	3-14	Very gravelly loam, extremely gravelly loam.	GC	A-2	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Biken-----	0-3	Very gravelly fine sandy loam.	GP-GM, GM	A-1	0-10	45-55	30-50	25-40	5-15	15-25	NP-5
	3-18	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0-10	50-60	35-50	25-45	15-30	15-25	NP-5
	18-30	Weathered bedrock	---	---	---	---	---	---	---	---	---
	30-34	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1288*: Urmafot-----	0-9	Gravelly loam----	GM, ML	A-2, A-4	0	60-80	50-75	40-65	30-60	25-35	NP-5
	9-32	Indurated material.	---	---	---	---	---	---	---	---	---
	32-60	Stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam.	GP, GP-GM, GM	A-1	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Cavehill-----	0-15	Very gravelly silt loam.	GM, GM-GC	A-2	0-15	40-55	35-50	30-45	25-35	25-35	5-10
	15-27	Very gravelly loam, very cobbly loam.	GM-GC, GM	A-2, A-4	10-45	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1288*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1291*: Maderbak-----	0-3	Very gravelly clay loam.	GC	A-2	0-5	45-55	35-45	25-35	15-25	30-40	10-20
	3-17	Very gravelly clay loam, very gravelly clay.	GC	A-2, A-7	0-5	30-60	25-50	20-50	15-40	40-55	20-30
	17-29	Very gravelly clay loam, very gravelly silty clay, very gravelly clay.	GC	A-2, A-7	0-5	30-60	25-50	20-50	15-45	40-55	20-30
	29	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
McIvey-----	0-12	Very cobbly loam	GC	A-6	25-50	50-70	45-65	40-60	35-50	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-7, A-2	10-55	45-60	35-50	35-45	30-45	45-55	30-35
1300*: Barfan-----	0-2	Gravelly sandy loam.	SM	A-2, A-1, A-5	0	60-85	50-75	30-65	15-45	40-60	NP-5
	2-11	Sandy loam, gravelly sandy loam.	SM	A-2, A-5, A-1	0	80-100	70-100	45-70	20-40	40-60	NP-5
	11	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
1310*: Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
Duffer-----	0-6	Silt loam-----	CL	A-6	0	100	100	95-100	85-95	30-35	10-15
	6-60	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	95-100	85-95	30-45	10-20

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1310*: Kunzler-----	0-10	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	10-26	Loam-----	ML, CL-ML	A-4	0	90-100	85-100	65-95	50-75	20-30	NP-10
	26-60	Fine sandy loam, sandy loam.	SM, SC-SM	A-2, A-4	0	90-100	85-100	45-80	25-50	20-30	NP-10
1321----- Sycomat	0-4	Sandy loam-----	SM, ML	A-4	0	85-100	80-100	55-75	40-60	15-25	NP-5
	4-15	Sandy loam-----	SM, ML	A-4	0	85-100	80-100	55-75	40-60	15-25	NP-5
	15-44	Sandy loam-----	SM, ML	A-4	0	85-100	80-100	55-75	40-60	15-25	NP-5
	44-60	Stratified sandy loam to sand.	SM	A-2, A-4	0	90-100	85-100	40-65	30-50	---	NP
1330*: Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
Dewar-----	0-3	Gravelly silt loam.	GC, CL, SC	A-6	0-5	60-90	55-80	45-80	35-70	25-35	10-15
	3-12	Gravelly silty clay loam, gravelly clay loam.	GC, CL	A-6, A-7	0-10	65-90	60-80	55-80	45-75	35-45	15-20
	12-18	Gravelly silt loam.	GM-GC, GC, CL-ML, CL	A-4, A-6	0-10	65-90	60-80	55-80	40-70	25-35	5-15
	18-60	Indurated material.	---	---	---	---	---	---	---	---	---
1340*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches Pct	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In										
1351*: Hyzen-----	0-2	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	2-12	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Kyler-----	0-3	Very gravelly very fine sandy loam.	GM, GM-GC	A-1, A-2	20-30	40-65	35-60	30-55	20-30	15-25	NP-10
	3-9	Very cobbly loam, very gravelly loam.	GM, GM-GC, SM, SC-SM	A-2, A-4	15-40	55-70	50-65	40-60	25-40	15-25	NP-10
	9-13	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
1360*: Eganroc-----	0-9	Very stony loam	GM-GC, GC	A-2	20-50	25-55	20-50	15-35	10-30	25-35	5-15
	9-34	Extremely gravelly loam, very gravelly loam.	GM, GM-GC	A-2, A-4	10-25	20-60	15-55	10-50	10-40	25-35	5-10
	34	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hyzen-----	0-1	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	1-6	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	6-10	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardzem-----	0-1	Channery loam----	SC-SM	A-4	0-25	70-80	65-75	50-70	35-50	20-30	5-10
	1-21	Very channery loam, extremely channery loam, extremely channery clay loam.	GC	A-2	10-25	20-50	15-45	10-40	10-35	30-40	10-15
	21-52	Weathered bedrock	---	---	---	---	---	---	---	---	---
	52	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1370*: Wardbay-----	0-18	Very gravelly loam.	GM, GM-GC	A-2	0-15	35-60	25-50	20-40	15-35	25-35	5-10
	18-45	Extremely cobbly silt loam, extremely gravelly silt loam.	GM, GM-GC	A-2	40-55	20-50	10-40	10-35	10-30	25-35	5-10
	45	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1370*: Haunchee-----	0-5	Very gravelly loam.	GM-GC	A-2	0-10	35-60	25-50	20-35	15-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardol-----	0-12	Very gravelly silt loam.	GM	A-1, A-2	10-25	40-55	35-50	25-45	20-35	25-35	NP-5
	12-33	Extremely gravelly silt loam.	GM	A-1	15-40	20-40	10-30	10-25	10-20	25-35	NP-5
	33-60	Extremely gravelly loam.	GM, GP-GM	A-1, A-2	15-40	20-40	10-30	10-25	5-20	25-35	NP-10
1372*: Wardbay-----	0-18	Very gravelly loam.	GM, GM-GC	A-2	0-15	35-60	25-50	20-40	15-35	25-35	5-10
	18-45	Extremely cobbly silt loam, extremely gravelly silt loam.	GM, GM-GC	A-2	40-55	20-50	10-40	10-35	10-30	25-35	5-10
	45	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardol-----	0-12	Very gravelly silt loam.	GM	A-1, A-2	10-25	40-55	35-50	25-45	20-35	25-35	NP-5
	12-33	Extremely gravelly silt loam.	GM	A-1	15-40	20-40	10-30	10-25	10-20	25-35	NP-5
	33-60	Extremely gravelly loam.	GM, GP-GM	A-1, A-2	15-40	20-40	10-30	10-25	5-20	25-35	NP-10
Adobe-----	0-5	Very gravelly silt loam.	GM	A-1, A-2	0	35-60	25-50	20-40	15-35	25-35	NP-5
	5-17	Very gravelly silt loam, very gravelly loam.	GM	A-1, A-2	0	35-60	25-50	20-40	15-35	25-35	NP-5
	17	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1374*: Wardbay-----	0-18	Very gravelly loam.	GM, GM-GC	A-2	0-15	35-60	25-50	20-40	15-35	25-35	5-10
	18-45	Extremely cobbly silt loam, extremely gravelly silt loam.	GM, GM-GC	A-2	40-55	20-50	10-40	10-35	10-30	25-35	5-10
	45	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1374*: Adobe-----	0-5	Very gravelly silt loam.	GM	A-1, A-2	0	35-60	25-50	20-40	15-35	25-35	NP-5
	5-17	Very gravelly silt loam, very gravelly loam.	GM	A-1, A-2	0	35-60	25-50	20-40	15-35	25-35	NP-5
	17	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Haunchee-----	0-5	Very gravelly loam.	GM-GC	A-2	0-10	35-60	25-50	20-35	15-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1380*: Cavehill-----	0-15	Cobbly loam-----	SC-SM, SM	A-4	10-20	70-90	60-85	45-60	35-50	25-35	5-10
	15-27	Very stony loam, very cobbly loam, very gravelly loam.	GM-GC, GM	A-2, A-4	5-40	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardol-----	0-12	Very gravelly silt loam.	GM	A-1, A-2	10-25	40-55	35-50	25-45	20-35	25-35	NP-5
	12-33	Extremely gravelly silt loam.	GM	A-1	15-40	20-40	10-30	10-25	10-20	25-35	NP-5
	33-60	Extremely gravelly loam.	GM, GP-GM	A-1, A-2	15-40	20-40	10-30	10-25	5-20	25-35	NP-10
Eganroc-----	0-9	Very stony loam	GM-GC, GC	A-2	20-50	25-55	20-50	15-35	10-30	25-35	5-15
	9-34	Extremely gravelly loam, very gravelly loam.	GM, GM-GC	A-2, A-4	10-25	20-60	15-55	10-50	10-40	25-35	5-10
	34	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1383*: Cavehill-----	0-15	Cobbly loam-----	SC-SM, SM	A-4	10-20	70-90	60-85	45-60	35-50	25-35	5-10
	15-27	Very stony loam, very cobbly loam, very gravelly loam.	GM-GC, GM	A-2, A-4	5-40	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cavehill-----	0-15	Extremely cobbly loam.	GM-GC, GM	A-2	40-45	40-50	30-40	25-35	20-30	25-35	5-10
	15-27	Very stony loam, very cobbly loam, very gravelly loam.	GM-GC, GM	A-2, A-4	5-40	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches Pct	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
1383*: Rock outcrop.											
1384*: Cavehill-----	0-15	Cobbly loam-----	SC-SM, SM	A-4	10-20	70-90	60-85	45-60	35-50	25-35	5-10
	15-27	Very stony loam, very cobbly loam, very gravelly loam.	GM-GC, GM	A-2, A-4	5-40	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Haunchee-----	0-5	Very cobbly loam	GM-GC	A-2	35-40	50-60	40-55	30-40	20-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cavehill-----	0-15	Extremely cobbly loam.	GM-GC, GM	A-2	40-45	40-50	30-40	25-35	20-30	25-35	5-10
	15-27	Very stony loam, very cobbly loam, very gravelly loam.	GM-GC, GM	A-2, A-4	5-40	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1385*: Cavehill-----	0-15	Cobbly loam-----	SC-SM, SM	A-4	10-20	70-90	60-85	45-60	35-50	25-35	5-10
	15-27	Very stony loam, very cobbly loam, very gravelly loam.	GM-GC, GM	A-2, A-4	5-40	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hyzen-----	0-2	Extremely stony loam.	GM	A-2, A-1	30-65	30-60	20-50	20-35	15-30	25-35	NP-5
	2-12	Extremely stony loam.	GM	A-2, A-1	45-65	30-50	20-45	10-35	10-30	25-35	NP-5
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Xine-----	0-7	Very gravelly loam.	GM	A-1, A-2	0-5	35-55	30-50	25-40	20-30	15-25	NP-5
	7-35	Very cobbly loam, very cobbly sandy loam.	GM, SM	A-2, A-4, A-1	35-50	55-80	50-75	35-60	20-45	15-25	NP-5
	35-39	Weathered bedrock	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1390*: Chen-----	0-7	Very gravelly loam.	GC	A-2	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-17	Very gravelly clay, extremely gravelly clay, very cobbly clay.	GC	A-2, A-7	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	17-21	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
McIvey-----	0-5	Gravelly loam----	GC, SC	A-6	0-10	60-85	50-75	45-70	35-50	30-40	10-15
	5-12	Very gravelly loam.	GC	A-2, A-6	0-10	50-60	45-55	35-50	25-45	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	0-55	45-60	35-50	35-45	30-45	45-55	20-30
1391*: Chen-----	0-7	Very gravelly loam.	GC	A-2	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-17	Very gravelly clay, extremely gravelly clay, very cobbly clay.	GC	A-2, A-7	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	17-21	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Tusel-----	0-13	Cobbly loam-----	SM, ML, SC-SM, CL-ML	A-4	15-35	80-95	75-90	55-70	40-55	20-30	NP-10
	13-42	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam.	GC	A-2	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	42-46	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1392*: Chen-----	0-7	Very gravelly loam.	GC	A-2	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-17	Very gravelly clay, extremely gravelly clay, very cobbly clay.	GC	A-2, A-7	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	17-21	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
McIvey-----	0-5	Gravelly loam----	GC, SC	A-6	0-10	60-85	50-75	45-70	35-50	30-40	10-15
	5-12	Very gravelly loam.	GC	A-2, A-6	0-10	50-60	45-55	35-50	25-45	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	0-55	45-60	35-50	35-45	30-45	45-55	20-30
Birchcreek-----	0-3	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	25-40	50-70	45-65	40-65	25-50	25-35	5-15
	3-10	Very cobbly clay loam, very cobbly clay loam, very stony clay loam.	GC, GM	A-2, A-6	10-45	50-60	40-55	40-50	30-40	35-40	10-15
	10-28	Very cobbly clay, extremely gravelly clay, very stony clay.	GC	A-2, A-7	10-45	45-70	35-70	35-65	25-50	45-60	20-35
	28	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1400*: Suak-----	0-10	Very stony loam	GM, GM-GC	A-1, A-2	40-55	45-65	40-60	30-40	20-35	20-30	NP-10
	10-25	Extremely cobbly loam, extremely gravelly loam.	GC	A-2	30-60	25-45	20-35	15-30	10-25	30-35	10-15
	25	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1400*: McIvey-----	0-12	Very gravelly loam.	GC	A-2	0-10	35-60	25-50	25-45	15-35	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	10-55	45-60	35-50	35-45	30-45	45-55	20-30
1430*: Hardzem-----	0-1	Channery loam----	SC-SM	A-4	0-25	70-80	65-75	50-70	35-50	20-30	5-10
	1-21	Very channery loam, extremely channery loam, extremely channery clay loam.	GC	A-2	10-25	20-50	15-45	10-40	10-35	30-40	10-15
	21-52	Weathered bedrock	---	---	---	---	---	---	---	---	---
	52	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Haunchee-----	0-5	Very cobbly loam	GM-GC	A-2	35-40	50-60	40-55	30-40	20-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Wardbay-----	0-18	Very gravelly loam.	GM, GM-GC	A-2	0-15	35-60	25-50	20-40	15-35	25-35	5-10
	18-45	Extremely cobbly silt loam, extremely gravelly silt loam.	GM, GM-GC	A-2	40-55	20-50	10-40	10-35	10-30	25-35	5-10
	45	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1431*: Hardzem-----	0-1	Channery loam----	SC-SM	A-4	0-25	70-80	65-75	50-70	35-50	20-30	5-10
	1-21	Very channery loam, extremely channery loam, extremely channery clay loam.	GC	A-2	10-25	20-50	15-45	10-40	10-35	30-40	10-15
	21-52	Weathered bedrock	---	---	---	---	---	---	---	---	---
	52	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1431*: Hackwood-----	0-22	Gravelly silt loam.	CL	A-6	5-10	75-80	65-80	60-75	50-65	25-35	10-15
	22-31	Gravelly loam, gravelly silt loam.	GM-GC, SC-SM, CL-ML, CL	A-4, A-6	0	60-80	50-75	40-70	35-65	25-35	5-15
	31-60	Very gravelly clay loam, very gravelly silty clay loam, very gravelly loam.	GC	A-2, A-6	0	40-60	35-50	30-45	25-40	35-40	15-20
Guiser-----	0-7	Extremely cobbly loam.	GM, GM-GC	A-2, A-1	30-65	25-45	15-35	15-35	10-30	20-30	NP-10
	7-15	Extremely cobbly coarse sandy loam, extremely cobbly sandy loam.	GP-GM, GM	A-1	45-55	25-55	15-45	10-30	5-15	15-25	NP-5
	15-36	Extremely cobbly loam, extremely cobbly sandy clay loam.	GM-GC, GC	A-2	40-50	40-55	30-45	15-35	10-20	25-35	5-15
	36-60	Extremely gravelly coarse sandy loam, extremely gravelly loamy coarse sand.	GP-GM	A-1	0-30	20-30	10-30	5-15	5-10	15-20	NP-5
1451*: Birchcreek-----	0-3	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	20-40	50-70	45-65	40-65	25-50	25-35	5-15
	3-10	Very cobbly clay loam, very gravelly clay loam, very stony clay loam.	GC, GM	A-2, A-6	25-55	50-60	40-55	40-50	30-40	35-40	10-15
	10-28	Very cobbly clay, extremely gravelly clay, very stony clay.	GC	A-2, A-7	25-55	45-70	35-70	35-65	25-50	45-60	20-35
	28-32	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Segura-----	0-3	Very cobbly loam	GM-GC, SC-SM	A-4	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	3-14	Gravelly clay loam, gravelly loam, sandy clay loam.	SC	A-2, A-6, A-7	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	14-18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1451*: Chen-----	0-7	Very gravelly loam.	GC	A-2	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-17	Very gravelly clay, extremely gravelly clay, very cobbly clay.	GC	A-2, A-7	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	17-21	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1460----- Unsel	0-4	Gravelly fine sandy loam.	SC-SM	A-2	0	75-85	55-75	40-60	25-35	25-30	5-10
	4-14	Gravelly clay loam, gravelly sandy clay loam.	SC	A-6	0	75-85	55-75	45-60	35-45	35-40	15-20
	14-22	Gravelly sandy loam, gravelly sandy clay loam.	SC-SM	A-2	0	60-75	50-70	35-50	20-35	20-30	5-10
	22-60	Very gravelly sand, very gravelly loamy sand, extremely gravelly sand.	GP-GM, GP	A-1	0	40-50	20-35	10-25	0-10	---	NP
1480*: Amelar-----	0-6	Very gravelly loam.	GM-GC, GC	A-2, A-4, A-6	5-15	40-60	35-50	30-45	25-40	25-35	5-15
	6-15	Very cobbly silty clay loam, very cobbly clay loam.	GC	A-2, A-6, A-7	20-40	50-75	40-65	35-50	30-50	35-45	15-20
	15-60	Very gravelly silt loam, very gravelly loam.	GM-GC, GC	A-2	0-20	40-60	30-50	30-45	20-35	25-35	5-15
Bobs-----	0-3	Very gravelly loam.	GM	A-1, A-2	0-15	40-55	35-50	30-45	20-35	20-25	NP-5
	3-14	Gravelly loam, gravelly very fine sandy loam, gravelly silt loam.	GM, SM	A-4	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	14-18	Indurated material.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct						
1491*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
1492*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
Shabliss-----	0-3	Gravelly loam----	GM-GC, SC-SM	A-4	0	65-80	60-75	50-70	35-50	15-25	5-10
	3-13	Gravelly loam, very fine sandy loam.	GM-GC, CL-ML	A-4	0	65-95	60-90	50-80	45-70	15-25	5-10
	13-55	Cemented material	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1492*: Linoyer-----	0-4	Very fine sandy loam.	ML	A-4	0	100	100	95-100	55-70	15-25	NP-5
	4-60	Very fine sandy loam, silt loam.	ML, CL-ML	A-4	0	100	100	95-100	80-95	15-30	NP-10
1493*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP
Parisa-----	0-4	Gravelly loam----	GM, SM	A-2, A-4	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	4-26	Very gravelly loam, very gravelly sandy loam.	GM, SM	A-1, A-2	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	26-47	Indurated material.	---	---	---	---	---	---	---	---	---
	47-60	Extremely gravelly coarse sandy loam.	GP, GP-GM	A-1	0-15	15-35	10-25	5-15	0-10	---	NP
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
1494*: Pyrat-----	0-6	Gravelly sandy loam.	SM, GM	A-2, A-4	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-17	Very gravelly sandy loam.	GM	A-1	0	40-60	25-50	20-40	10-25	15-25	NP-5
	17-27	Very gravelly loam, very gravelly sandy loam.	GM	A-1, A-2	0	40-60	25-50	20-45	15-35	15-25	NP-5
	27-39	Very gravelly sandy loam.	GM	A-1	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	39-60	Stratified very gravelly coarse sandy loam to extremely gravelly loamy sand.	GP, GP-GM, GM	A-1	0-15	15-50	10-45	5-35	0-15	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1494*: McConnel-----	0-3	Gravelly fine sandy loam.	GM	A-2, A-4	0	60-70	50-70	40-60	25-45	15-25	NP-5
	3-11	Loam, sandy loam, fine sandy loam.	ML, SM	A-4	0	90-100	80-100	65-80	45-60	15-25	NP-5
	11-42	Stratified very gravelly sandy loam to extremely gravelly coarse sand.	GP	A-1	0-15	25-35	10-35	5-15	0-5	---	NP
	42-60	Sandy loam-----	SM	A-2, A-4	0	95-100	85-95	55-75	25-50	15-25	NP-5
1510*: Raph-----	0-4	Silt loam-----	CL-ML, CL	A-4, A-6	0	95-100	95-100	85-95	75-85	25-35	5-15
	4-30	Loam, silt loam	CL	A-6	0	90-100	85-100	80-95	60-75	30-35	10-15
	30-42	Gravelly sandy loam.	SC-SM, GM-GC	A-2	0	55-80	50-75	35-50	20-30	25-30	5-10
	42-60	Stratified fine sandy loam to very gravelly coarse sand.	SM, GM	A-1	0	55-80	50-75	15-35	10-20	15-25	NP-5
Zimwala-----	0-13	Silt loam-----	ML	A-4	0	100	100	95-100	90-100	30-35	NP-5
	13-40	Stratified silt loam to silty clay loam.	ML	A-6, A-7	0	100	100	95-100	90-100	35-50	10-20
	40-60	Silty clay-----	ML, MH	A-7	0	100	100	100	95-100	45-60	15-25
Heist-----	0-3	Silt loam-----	ML	A-4	0	90-100	85-100	70-90	50-70	15-25	NP-5
	3-36	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	80-100	75-100	50-80	25-50	15-25	NP-5
	36-60	Gravelly fine sandy loam, gravelly sandy loam.	SM, GM	A-1, A-2, A-4	0	55-80	50-75	35-60	15-40	15-25	NP-5
1511*: Hessing-----	0-4	Silt loam-----	CL-ML	A-4	0	100	100	95-100	85-95	25-30	5-10
	4-15	Silt loam, silty clay loam.	CL	A-6	0	100	100	95-100	85-95	30-40	10-20
	15-31	Gravelly loam, gravelly sandy loam.	GM, SM	A-4	0	60-80	50-75	45-55	35-50	25-30	NP-5
	31-60	Stratified very gravelly loamy coarse sand to extremely gravelly sand.	GP-GM, GW-GM	A-1	0	35-45	20-35	10-20	5-10	---	NP
Uwell-----	0-3	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	3-26	Silt loam-----	ML	A-4	0	100	75-100	65-90	55-85	30-40	NP-10
	26-60	Silty clay loam, silty clay.	ML, MH	A-7	0	100	100	90-100	80-100	40-60	10-20
Zimwala-----	0-13	Silt loam-----	ML	A-4	0	100	100	95-100	90-100	30-35	NP-5
	13-40	Stratified silt loam to silty clay loam.	ML	A-6, A-7	0	100	100	95-100	90-100	35-50	10-20
	40-60	Silty clay-----	ML, MH	A-7	0	100	100	100	95-100	45-60	15-25

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1520*: Fax-----	0-3	Very cobbly coarse sandy loam.	SM, GM	A-1	25-50	50-75	45-65	20-40	10-20	15-25	NP-5
	3-12	Very gravelly sandy clay loam, very cobbly sandy clay loam.	GC	A-2, A-6	0-40	40-70	30-60	20-50	10-40	30-40	10-20
	12-22	Very gravelly sandy clay loam, very cobbly coarse sandy loam.	GC, GM-GC, SC, SC-SM	A-2	10-50	40-65	30-55	15-45	10-25	25-35	5-15
	22-48	Cemented material	---	---	---	---	---	---	---	---	---
Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
Broland-----	0-3	Very gravelly loam.	GM, GC, GM-GC	A-2, A-4, A-6	0-10	40-55	30-45	25-45	25-40	20-35	NP-15
	3-9	Gravelly clay loam, gravelly sandy clay loam.	SC, GC, CL	A-2, A-6, A-7	0-10	60-85	50-75	35-65	30-55	35-45	15-20
	9-16	Extremely gravelly sandy clay loam, very gravelly clay loam, extremely gravelly clay loam.	GC	A-2	5-25	40-60	30-55	15-35	15-25	30-40	10-15
	16-19	Extremely gravelly sandy loam, very gravelly sandy loam.	GM-GC, GM	A-1, A-2	0-25	30-60	20-50	15-30	10-20	20-30	NP-10
	19-40	Cemented material	---	---	---	---	---	---	---	---	---
	40-60	Extremely gravelly coarse sand.	GP-GM, GP	A-1	0-5	20-35	10-25	5-20	0-10	---	NP
1550*: Haunchee-----	0-5	Very gravelly loam.	GM-GC	A-2	0-10	35-60	25-50	20-35	15-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1550*: Muiral-----	0-9	Gravelly loam----	GM, ML	A-4	0-10	60-85	50-75	45-65	35-55	20-25	NP-5
	9-33	Very gravelly loam, very gravelly silt loam.	GM	A-1, A-2, A-4	15-30	35-70	30-60	20-50	15-45	20-25	NP-5
	33	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Wardbay-----	0-18	Very gravelly loam.	GM, GM-GC	A-2	0-15	35-60	25-50	20-40	15-35	25-35	5-10
	18-45	Extremely cobbly silt loam, extremely gravelly silt loam.	GM, GM-GC	A-2	40-55	20-50	10-40	10-35	10-30	25-35	5-10
	45	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1560*: Adobe-----	0-5	Very gravelly silt loam.	GM	A-1, A-2	0	35-60	25-50	20-40	15-35	25-35	NP-5
	5-17	Very gravelly silt loam, very gravelly loam.	GM	A-1, A-2	0	35-60	25-50	20-40	15-35	25-35	NP-5
	17	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Haunchee-----	0-5	Very gravelly loam.	GM-GC	A-2	0-10	35-60	25-50	20-35	15-30	20-30	5-10
	5-16	Very gravelly loam, very gravelly very fine sandy loam.	GM-GC	A-2	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	16-20	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hardzem-----	0-1	Channery loam----	SC-SM	A-4	0-25	70-80	65-75	50-70	35-50	20-30	5-10
	1-21	Very channery loam, extremely channery loam, extremely channery clay loam.	GC	A-2	10-25	20-50	15-45	10-40	10-35	30-40	10-15
	21-52	Weathered bedrock	---	---	---	---	---	---	---	---	---
	52	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1570*: Nyala-----	0-3	Sandy loam-----	SC-SM, SM	A-4	0-5	90-100	85-95	60-75	35-50	20-30	NP-10
	3-12	Sandy clay loam, clay loam.	CL	A-6, A-7	0	90-100	85-100	75-90	50-65	35-45	15-20
	12-56	Sandy loam-----	SC-SM, SM	A-4	0	90-100	85-100	55-70	35-50	20-30	NP-10
	56-60	Gravelly loamy sand, loamy sand.	SM	A-1	0-5	75-95	65-85	35-50	10-25	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches Pct	Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In										
1570*: Broyles-----	0-12	Very fine sandy loam.	ML	A-4	0	100	95-100	85-95	60-75	---	NP
	12-60	Stratified loam to gravelly loamy sand.	SM	A-2	0	70-100	60-95	30-40	25-35	---	NP
1580*: Wredah-----	0-5	Gravelly sandy loam.	SC-SM	A-2	0-10	60-80	55-75	40-60	20-30	25-30	5-10
	5-17	Gravelly sandy clay loam.	GC, SC	A-2, A-6	0-10	60-80	55-75	50-65	30-45	35-40	15-20
	17-34	Very gravelly sandy loam.	GM	A-1	0-15	35-60	30-55	25-45	15-25	15-20	NP-5
	34-60	Extremely gravelly sandy loam.	GP-GM	A-1	10-30	15-30	10-25	5-15	5-10	15-20	NP-5
Selti-----	0-4	Very stony coarse sandy loam.	SM	A-1, A-2	25-55	60-80	40-65	25-40	15-30	15-25	NP-5
	4-30	Very cobbly sandy clay loam, very cobbly sandy loam.	GM-GC, GC	A-2, A-4, A-6	25-55	50-60	45-55	30-50	25-40	25-35	5-15
	30-60	Extremely stony loamy coarse sand.	GP, GP-GM, SP, SP-SM	A-1	45-65	45-70	20-45	10-20	0-10	---	NP
Tulase-----	0-2	Silt loam-----	CL-ML, ML	A-4	0	100	100	100	90-100	15-25	NP-10
	2-60	Very fine sandy loam, silt loam.	CL-ML, ML	A-4	0	100	100	95-100	70-85	15-25	NP-10
1610*: Sheffit-----	0-3	Silt loam-----	CL-ML, ML	A-4	0	100	95-100	80-100	65-85	25-35	5-10
	3-60	Stratified silt loam to clay.	CL, ML, MH	A-7	0	100	95-100	90-100	85-95	40-60	15-25
Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
1700*: Garfan-----	0-8	Very gravelly loam.	GC, GM-GC	A-2, A-4, A-6	10-25	40-65	30-55	25-50	20-40	25-35	5-15
	8-27	Extremely cobbly clay, extremely cobbly clay loam.	GC, GP-GC	A-2	25-50	20-45	10-35	10-25	5-15	40-50	20-30
	27-60	Extremely gravelly clay, extremely gravelly clay loam.	GC	A-2	5-25	25-40	20-35	15-30	10-25	40-50	20-30

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1700*: Garfan-----	0-8	Very gravelly loam.	GC, GM-GC	A-2, A-4, A-6	10-25	40-65	30-55	25-50	20-40	25-35	5-15
	8-27	Extremely cobbly clay, extremely cobbly clay loam.	GC, GP-GC	A-2	25-50	20-45	10-35	10-25	5-15	40-50	20-30
	27-60	Extremely gravelly clay, extremely gravelly clay loam.	GC	A-2	5-25	25-40	20-35	15-30	10-25	40-50	20-30
McIvey-----	0-12	Very gravelly loam.	GC	A-2	0-10	35-60	25-50	25-45	15-35	30-40	10-15
	12-18	Very gravelly clay loam, gravelly clay loam.	GC, SC, CL	A-7	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-62	Very gravelly clay, very cobbly clay, extremely cobbly clay.	GC	A-2, A-7	10-55	45-60	35-50	35-45	30-45	45-55	20-30
1800*: Pookaloo-----	0-4	Very gravelly loam.	GM	A-2	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	4-19	Very gravelly loam, very gravelly silt loam.	GM	A-2, A-4	0	50-60	35-50	35-45	25-40	20-25	NP-5
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Onkeyo-----	0-8	Very gravelly silt loam.	GC	A-2, A-6	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-15	Extremely cobbly silty clay loam, very cobbly silty clay loam.	GM	A-2, A-7	35-60	55-75	20-50	20-50	15-45	40-45	10-15
	15	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Cavehill-----	0-15	Very gravelly silt loam.	GM, GM-GC	A-2	0-15	40-55	35-50	30-45	25-35	25-35	5-10
	15-27	Very gravelly loam, very cobbly loam.	GM-GC, GM	A-2, A-4	10-45	35-70	30-65	25-50	20-40	25-35	5-10
	27-31	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
1810*: Ilton-----	0-4	Gravelly sandy loam.	SM	A-1	0-10	60-80	50-75	30-50	15-25	---	NP
	4-24	Gravelly sandy loam.	SC-SM, SM	A-1, A-2	0-15	60-80	50-75	30-50	15-25	20-30	NP-10
	24-36	Gravelly sandy loam.	SC-SM, SM	A-1, A-2	0-15	60-80	50-75	30-50	15-25	20-30	NP-10
	36	Weathered bedrock	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1810*: Yody-----	0-4	Gravelly sandy loam.	SM	A-1	0-5	70-80	65-75	40-50	20-25	---	NP
	4-30	Gravelly sandy clay loam, gravelly clay loam.	SC	A-6	0-5	75-85	65-75	55-65	35-50	30-40	10-20
	30-36	Gravelly loam, gravelly sandy loam, gravelly loamy sand.	SM, GM	A-1, A-2	0-5	60-70	50-60	35-50	20-35	20-25	NP-5
	36-60	Cemented material	---	---	---	---	---	---	---	---	---
Blimo-----	0-8	Gravelly loam----	GM, SM	A-2, A-4	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-60	Gravelly sandy loam.	GM, SM	A-2, A-4	0	60-85	50-75	40-60	30-45	20-25	NP-5
1820*: Sodhouse-----	0-9	Gravelly loam----	GM, SM, ML	A-4	0	65-80	60-75	40-70	35-55	20-25	NP-5
	9-14	Gravelly loam, gravelly fine sandy loam.	GM, ML, SM	A-4	0	65-80	60-75	40-70	35-60	20-25	NP-5
	14-25	Indurated material.	---	---	---	---	---	---	---	---	---
	25-60	Stratified very gravelly loamy coarse sand to gravelly loam.	GM, SM, GP-GM, SP-SM	A-4, A-1, A-2, A-3	0-5	20-80	15-75	10-70	5-50	15-20	NP-5
Sodhouse-----	0-6	Gravelly loam----	GM, SM, ML	A-4	0	65-80	60-75	40-70	35-55	20-25	NP-5
	6-14	Gravelly loam, gravelly fine sandy loam.	GM, ML, SM	A-4	0	65-80	60-75	40-70	35-60	20-25	NP-5
	14-25	Indurated material.	---	---	---	---	---	---	---	---	---
	25-60	Stratified very gravelly loamy coarse sand to gravelly loam.	GM, SM, GP-GM, SP-SM	A-4, A-1, A-2, A-3	0-5	20-80	15-75	10-70	5-50	15-20	NP-5
1821*: Sodhouse-----	0-9	Gravelly loam----	GM, SM, ML	A-4	0	65-80	60-75	40-70	35-55	20-25	NP-5
	9-14	Gravelly loam, gravelly fine sandy loam.	GM, ML, SM	A-4	0	65-80	60-75	40-70	35-60	20-25	NP-5
	14-25	Indurated material.	---	---	---	---	---	---	---	---	---
	25-60	Stratified very gravelly loamy coarse sand to gravelly loam.	GM, SM, GP-GM, SP-SM	A-4, A-1, A-2, A-3	0-5	20-80	15-75	10-70	5-50	15-20	NP-5

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	<u>In</u>				<u>Pct</u>					<u>Pct</u>	
1821*: Palinor-----	0-10	Gravelly loam----	SM, GM	A-4	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	10-18	Extremely gravelly loam, very gravelly loam.	GM	A-1, A-2	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	18-30	Indurated material.	---	---	---	---	---	---	---	---	---
	30-60	Stratified gravelly sandy loam to extremely gravelly coarse sand.	GM	A-1, A-2	0-30	30-50	20-45	15-35	10-30	---	NP
1830*: Armespan-----	0-1	Very gravelly sandy loam.	GM	A-1	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	1-4	Sandy loam, gravelly sandy loam, gravelly loam.	SM	A-1, A-2	0-5	80-95	65-90	45-65	20-35	20-25	NP-5
	4-10	Gravelly sandy loam, gravelly loam.	SM, GM	A-2, A-4	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	10-36	Very gravelly sandy loam, very gravelly coarse sandy loam.	GM	A-1	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	36-60	Very gravelly loamy coarse sand, very gravelly loamy sand.	SM, SP-SM, GM, GP-GM	A-1	0-10	30-60	25-50	10-35	5-15	---	NP
Cliffdown-----	0-3	Very gravelly sandy loam.	GM	A-1, A-2	0-5	30-55	25-50	20-35	10-30	---	NP
	3-60	Stratified gravelly sandy loam to very gravelly fine sandy loam.	GM	A-1, A-2	0-5	45-55	40-50	30-40	15-30	---	NP
Candelaria-----	0-1	Very gravelly sandy loam.	GM	A-1	0-15	35-50	30-45	25-40	10-20	20-25	NP-5
	1-3	Gravelly fine sandy loam.	SM	A-2	0-10	70-80	65-75	50-60	20-35	20-25	NP-5
	3-22	Very gravelly sandy loam, very gravelly loamy sand, extremely gravelly sandy loam.	GM	A-1	0-10	25-45	20-45	15-25	10-20	15-25	NP-5
	22-60	Stratified extremely gravelly sand to very gravelly loamy coarse sand.	GP-GM, GP	A-1	0-10	25-45	20-35	10-20	0-10	---	NP

See footnote at end of table.

TABLE 8.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag- ments >3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
1850*: Clan Alpine-----	0-10	Very cobbly sandy loam.	GM-GC, SC-SM	A-4	25-40	65-75	55-70	45-60	35-50	20-25	5-10
	10-30	Very cobbly loam, very cobbly clay loam, very gravelly clay loam.	GC	A-2, A-6	15-35	50-70	35-60	25-50	20-40	30-40	10-20
	30-34	Weathered bedrock	---	---	---	---	---	---	---	---	---
Rubble land-----	0-60	Fragmental material.	GP	A-1	75-90	0-10	0-5	0-5	0	---	NP
Rock outcrop.											
1860*: Hackwood-----	0-22	Gravelly silt loam.	CL	A-6	5-10	75-80	65-80	60-75	50-65	25-35	10-15
	22-31	Gravelly loam, gravelly silt loam.	GM-GC, SC-SM, CL-ML, CL	A-4, A-6	0	60-80	50-75	40-70	35-65	25-35	5-15
	31-60	Very gravelly clay loam, very gravelly silty clay loam, very gravelly loam.	GC	A-2, A-6	0	40-60	35-50	30-45	25-40	35-40	15-20
Chen-----	0-7	Very gravelly loam.	GC	A-2	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-17	Very gravelly clay, extremely gravelly clay, very cobbly clay.	GC	A-2, A-7	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	17-21	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Tusel-----	0-13	Cobbly loam-----	SM, ML, SC-SM, CL-ML	A-4	15-35	80-95	75-90	55-70	40-55	20-30	NP-10
	13-42	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam.	GC	A-2	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	42-46	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS

(The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated)

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
100*:												
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	-----	---			
Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.12-0.14	7.9-9.0	<2	Low-----	0.15	2	8	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	-----	---			
Rock outcrop.												
104*:												
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	-----	---			
Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-12	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	12	---	---	0.0-0.01	---	---	---	-----	---			
Hyzen-----	0-1	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	1-6	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	6-10	---	---	0.0-0.01	---	---	---	-----	---			
108*:												
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	-----	---			
Tecomar-----	0-3	18-27	1.30-1.45	0.6-2.0	0.03-0.07	7.9-9.0	<2	Low-----	0.17	1	8	1-2
	3-18	20-27	1.30-1.45	0.6-2.0	0.04-0.09	7.9-9.0	<2	Low-----	0.10			
	18-22	---	---	0.0-0.01	---	---	---	-----	---			
Rock outcrop.												
109*:												
Hyzen-----	0-2	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	2-12	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	12	---	---	0.0-0.01	---	---	---	-----	---			
Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.12-0.14	7.9-9.0	<2	Low-----	0.15	2	8	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	-----	---			
Hyzen-----	0-1	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	1-6	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	6-10	---	---	0.0-0.01	---	---	---	-----	---			
110*:												
Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-12	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	12	---	---	0.0-0.01	---	---	---	-----	---			
Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-12	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	12	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
111*: Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-7	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	7	---	---	0.0-0.01	---	---	---	-----	---			
Hyzen-----	0-1	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	1-6	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	6-10	---	---	0.0-0.01	---	---	---	-----	---			
Rock outcrop.												
113*: Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.05-0.07	7.9-9.0	<2	Low-----	0.10	1	8	1-2
	1-12	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	12	---	---	0.0-0.01	---	---	---	-----	---			
Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-7	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	7	---	---	0.0-0.01	---	---	---	-----	---			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	-----	---			
119*: Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-12	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	12	---	---	0.0-0.01	---	---	---	-----	---			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	-----	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
120*: Tecomar-----	0-3	18-27	1.30-1.45	0.6-2.0	0.03-0.07	7.9-9.0	<2	Low-----	0.17	1	8	1-2
	3-18	20-27	1.30-1.45	0.6-2.0	0.04-0.09	7.9-9.0	<2	Low-----	0.10			
	18-22	---	---	0.0-0.01	---	---	---	-----	---			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	-----	---			
Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-12	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	12	---	---	0.0-0.01	---	---	---	-----	---			
124*: Tecomar-----	0-3	18-27	1.30-1.45	0.6-2.0	0.03-0.07	7.9-9.0	<2	Low-----	0.17	1	8	1-2
	3-10	20-27	1.30-1.45	0.6-2.0	0.04-0.09	7.9-9.0	<2	Low-----	0.10			
	10-14	---	---	0.0-0.01	---	---	---	-----	---			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	-----	---			
Tecomar-----	0-3	18-27	1.30-1.45	0.6-2.0	0.03-0.07	7.9-9.0	<2	Low-----	0.17	1	8	1-2
	3-18	20-27	1.30-1.45	0.6-2.0	0.04-0.09	7.9-9.0	<2	Low-----	0.10			
	18-22	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm		K	T	group	Pct
126*:												
Tecomar-----	0-3	18-27	1.30-1.45	0.6-2.0	0.03-0.07	7.9-9.0	<2	Low-----	0.17	1	8	1-2
	3-18	20-27	1.30-1.45	0.6-2.0	0.04-0.09	7.9-9.0	<2	Low-----	0.10			
	18-22	---	---	0.0-0.01	---	---	---	-----	---			
Xine-----	0-7	10-18	1.15-1.30	2.0-6.0	0.08-0.10	7.4-8.4	<2	Low-----	0.10	2	7	2-4
	7-35	10-18	1.15-1.35	2.0-6.0	0.08-0.11	7.9-9.0	<2	Low-----	0.10			
	35-39	---	---	0.0-0.01	---	---	---	-----	---			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	-----	---			
160*:												
Zerk-----	0-3	12-17	1.30-1.50	2.0-6.0	0.13-0.15	7.9-9.0	<2	Low-----	0.20	2	5	<1
	3-12	12-17	1.35-1.55	2.0-6.0	0.11-0.13	7.9-9.0	<2	Low-----	0.17			
	12-60	0-10	1.50-1.65	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
Heist-----	0-8	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	8-40	8-18	1.40-1.60	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	40-60	2-8	1.45-1.65	2.0-6.0	0.06-0.08	7.9-9.0	2-4	Low-----	0.20			
Tosser-----	0-8	12-18	1.30-1.50	0.6-2.0	0.14-0.18	7.9-8.4	<2	Low-----	0.28	5	4L	1-2
	8-16	12-18	1.40-1.60	0.6-2.0	0.06-0.12	7.9-9.0	<2	Low-----	0.10			
	16-24	2-8	1.50-1.70	6.0-20	0.03-0.05	>8.4	<4	Low-----	0.02			
	24-60	2-8	1.50-1.70	2.0-6.0	0.03-0.05	>8.4	<4	Low-----	0.02			
162*:												
Broyles-----	0-12	5-15	1.35-1.55	0.6-2.0	0.13-0.16	7.9-9.0	2-8	Low-----	0.55	5	3	<1
	12-60	5-15	1.40-1.60	2.0-6.0	0.09-0.11	>8.4	4-16	Low-----	0.24			
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
166*:												
Tosser-----	0-8	12-18	1.30-1.50	0.6-2.0	0.14-0.18	7.9-8.4	<2	Low-----	0.28	5	4L	1-2
	8-16	12-18	1.40-1.60	0.6-2.0	0.06-0.12	7.9-9.0	<2	Low-----	0.10			
	16-24	2-8	1.50-1.70	6.0-20	0.03-0.05	>8.4	<4	Low-----	0.02			
	24-60	2-8	1.50-1.70	2.0-6.0	0.03-0.05	>8.4	<4	Low-----	0.02			
Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
Linoyer-----	0-4	12-18	1.30-1.50	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	5	3	.5-1
	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
170*:												
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
170*: Hessing-----	0-4	15-20	1.25-1.45	0.6-2.0	0.19-0.21	7.9-9.0	2-4	Low-----	0.55	3	5	<.5
	4-15	20-30	1.25-1.45	0.2-0.6	0.19-0.21	7.9-9.0	2-4	Moderate	0.49			
	15-31	15-27	1.40-1.55	0.6-2.0	0.14-0.16	8.5-9.0	4-16	Low-----	0.32			
	31-60	0-5	1.50-1.70	>20	0.03-0.06	7.9-9.0	>16	Low-----	0.05			
Zerk-----	0-3	12-17	1.30-1.50	2.0-6.0	0.13-0.15	7.9-9.0	<2	Low-----	0.20	2	5	<1
	3-12	12-17	1.35-1.55	2.0-6.0	0.11-0.13	7.9-9.0	<2	Low-----	0.17			
	12-60	0-10	1.50-1.65	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
173*: Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
Yody-----	0-3	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	3-16	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	16-38	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	38-60	---	---	0.0-0.01	---	---	---	-----	---			
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
174*: Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
179*: Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
Pern-----	0-14	18-25	1.30-1.50	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.37	5	4L	1-2
	14-20	18-25	1.40-1.60	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.43			
	20-60	18-25	1.40-1.60	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.43			
181*: Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
Cowgil-----	0-4	10-20	1.30-1.50	2.0-6.0	0.05-0.08	7.4-8.4	<2	Low-----	0.10	5	5	1-2
	4-21	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.05			
	21-61	2-10	1.50-1.65	>20	0.03-0.04	7.9-9.0	<2	Low-----	0.02			
Broyles-----	0-12	5-15	1.35-1.55	0.6-2.0	0.13-0.16	7.9-9.0	2-8	Low-----	0.55	5	3	<1
	12-60	5-15	1.40-1.60	2.0-6.0	0.09-0.11	>8.4	4-16	Low-----	0.24			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm		K	T	group	Pct
185*:												
Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Tulase-----	0-5	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	5-70	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
189*:												
Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
Linoyer-----	0-4	12-18	1.30-1.50	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	5	3	.5-1
	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
190*:												
Cowgil-----	0-4	10-20	1.30-1.50	2.0-6.0	0.05-0.08	7.4-8.4	<2	Low-----	0.10	5	5	1-2
	4-21	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.05			
	21-61	2-10	1.50-1.65	>20	0.03-0.04	7.9-9.0	<2	Low-----	0.02			
Yody-----	0-3	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	3-16	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	16-38	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	38-60	---	---	0.0-0.01	---	---	---	---	---			
Fax-----	0-3	8-18	1.40-1.60	2.0-6.0	0.04-0.07	7.4-8.4	<2	Low-----	0.10	2	6	2-4
	3-12	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.15			
	12-22	14-28	1.40-1.60	0.2-0.6	0.06-0.09	7.9-8.4	<2	Low-----	0.15			
	22-48	---	---	0.0-0.01	---	---	---	---	---			
192*:												
Cowgil-----	0-4	10-20	1.30-1.50	2.0-6.0	0.05-0.08	7.4-8.4	<2	Low-----	0.10	5	5	1-2
	4-21	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.05			
	21-61	2-10	1.50-1.65	>20	0.03-0.04	7.9-9.0	<2	Low-----	0.02			
Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	---	---			
201*:												
Hyzen-----	0-1	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	1-6	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	6-10	---	---	0.0-0.01	---	---	---	---	---			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			
Tecomar-----	0-3	18-27	1.30-1.45	0.6-2.0	0.03-0.07	7.9-9.0	<2	Low-----	0.17	1	8	1-2
	3-18	20-27	1.30-1.45	0.6-2.0	0.04-0.09	7.9-9.0	<2	Low-----	0.10			
	18-22	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
205*:												
Hyzen-----	0-1	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	1-6	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	6-10	---	---	0.0-0.01	---	---	---	-----	---			
Hardzem-----	0-1	10-20	1.40-1.60	0.6-2.0	0.10-0.15	7.4-7.8	<2	Low-----	0.20	2	6	1-2
	1-21	20-30	1.40-1.60	0.06-0.2	0.05-0.11	6.6-7.8	<2	Low-----	0.05			
	21-52	---	---	0.0-20.0	---	---	---	-----	---			
	52	---	---	0.0-0.01	---	---	---	-----	---			
Rock outcrop.												
220*:												
Hutchley-----	0-3	12-25	1.15-1.25	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	1	7	2-3
	3-12	28-35	1.40-1.50	0.2-0.6	0.09-0.11	6.6-7.8	<2	Moderate	0.10			
	12-16	---	---	---	---	---	---	-----	---			
McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.10-0.15	6.6-7.3	<2	Moderate	0.05	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Low-----	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Suak-----	0-10	10-20	1.20-1.40	0.6-2.0	0.04-0.07	6.6-7.3	<2	Low-----	0.05	2	8	2-5
	10-25	20-27	1.30-1.50	0.6-2.0	0.03-0.06	7.4-7.8	<2	Moderate	0.02			
	25	---	---	0.0-0.01	---	---	---	-----	---			
223*:												
Hutchley-----	0-3	12-25	1.15-1.25	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	1	7	2-3
	3-12	28-35	1.40-1.50	0.2-0.6	0.09-0.11	6.6-7.8	<2	Moderate	0.10			
	12-16	---	---	---	---	---	---	-----	---			
McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.10-0.15	6.6-7.3	<2	Moderate	0.05	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Low-----	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	-----	---			
224*:												
Hutchley-----	0-3	12-25	1.15-1.25	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	1	7	2-3
	3-12	28-35	1.40-1.50	0.2-0.6	0.09-0.11	6.6-7.8	<2	Moderate	0.10			
	12-16	---	---	---	---	---	---	-----	---			
McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.10-0.15	6.6-7.3	<2	Moderate	0.05	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Low-----	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
226*:												
Hutchley-----	0-3	12-25	1.15-1.25	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	1	7	2-3
	3-12	28-35	1.40-1.50	0.2-0.6	0.09-0.11	6.6-7.8	<2	Moderate	0.10			
	12-16	---	---	---	---	---	---	-----	---			
Tusel-----	0-13	10-20	1.20-1.40	0.6-2.0	0.13-0.15	6.1-7.3	<2	Low-----	0.20	3	6	2-5
	13-42	25-35	1.25-1.45	0.2-0.6	0.08-0.11	6.1-7.3	<2	Moderate	0.20			
	42-46	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
226*:												
Suak-----	0-10	10-20	1.20-1.40	0.6-2.0	0.04-0.07	6.6-7.3	<2	Low-----	0.05	2	8	2-5
	10-25	20-27	1.30-1.50	0.6-2.0	0.03-0.06	7.4-7.8	<2	Moderate	0.02			
	25	---	---	0.0-0.01	---	---	---	-----	---			
230*:												
Linoyer-----	0-4	12-18	1.30-1.50	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	5	3	.5-1
	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
231-----	0-4	12-18	1.30-1.50	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	5	3	.5-1
Linoyer	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
232*:												
Linoyer-----	0-4	12-18	1.30-1.50	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	5	3	.5-1
	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
233-----	0-4	12-18	1.55-1.70	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	4	3	.5-1
Linoyer	4-45	12-18	1.55-1.70	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
	45-60	5-10	1.60-1.75	6.0-20	0.04-0.07	7.9-9.0	<2	Low-----	0.10			
241*:												
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
Raph-----	0-4	18-25	1.40-1.60	0.6-2.0	0.16-0.18	7.9-9.0	<4	Moderate	0.37	5	5	<.5
	4-30	20-27	1.40-1.60	0.6-2.0	0.18-0.20	7.9-9.0	<4	Moderate	0.37			
	30-42	15-20	1.50-1.65	2.0-6.0	0.08-0.10	7.9-9.0	<4	Low-----	0.20			
	42-60	6-15	1.50-1.70	2.0-6.0	0.06-0.08	7.9-9.0	<4	Low-----	0.10			
242*:												
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
243*:												
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
Heist-----	0-8	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	8-40	8-18	1.40-1.60	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	40-60	2-8	1.45-1.65	2.0-6.0	0.06-0.08	7.9-9.0	2-4	Low-----	0.20			
Nyak-----	0-9	27-35	1.25-1.45	0.2-0.6	0.19-0.21	7.9-8.4	<2	Moderate	0.28	5	4L	1-2
	9-14	10-18	1.40-1.60	2.0-6.0	0.13-0.15	7.9-8.4	<2	Low-----	0.32			
	14-60	10-18	1.45-1.65	0.2-0.6	0.15-0.18	7.9-9.0	<2	Moderate	0.28			
244*:												
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
Raph-----	0-4	18-25	1.40-1.60	0.6-2.0	0.16-0.18	7.9-9.0	<4	Moderate	0.37	5	5	<.5
	4-30	20-27	1.40-1.60	0.6-2.0	0.18-0.20	7.9-9.0	<4	Moderate	0.37			
	30-42	15-20	1.50-1.65	2.0-6.0	0.08-0.10	7.9-9.0	<4	Low-----	0.20			
	42-60	6-15	1.50-1.70	2.0-6.0	0.06-0.08	7.9-9.0	<4	Low-----	0.10			
246*:												
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
250*:												
Sheffit-----	0-3	17-27	1.40-1.60	0.6-2.0	0.19-0.21	>8.4	4-8	Low-----	0.55	5	4L	<1
	3-60	35-50	1.40-1.60	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
252*:												
Sheffit-----	0-3	17-27	1.40-1.60	0.6-2.0	0.19-0.21	>8.4	4-8	Low-----	0.55	5	4L	<1
	3-60	35-50	1.40-1.60	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
Equis-----	0-6	40-50	1.10-1.30	<0.06	0.09-0.11	8.5-9.0	8-16	High-----	0.28	5	4	1-2
	6-30	40-50	1.05-1.25	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
	30-50	30-45	1.25-1.45	<0.06	0.14-0.17	8.5-9.0	4-8	High-----	0.24			
	50-60	20-45	1.30-1.50	0.06-0.2	0.15-0.21	8.5-9.0	<4	High-----	0.32			
Equis-----	0-6	40-50	1.25-1.45	<0.06	0.09-0.11	8.5-9.0	8-16	High-----	0.28	5	4	1-2
	6-30	40-50	1.25-1.45	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
	30-50	30-45	1.35-1.55	<0.06	0.14-0.17	8.5-9.0	4-8	High-----	0.24			
	50-60	20-45	1.45-1.65	0.06-0.2	0.15-0.21	8.5-9.0	<4	High-----	0.32			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
253*:												
Sheffit-----	0-3	0-5	1.50-1.65	6.0-20	0.05-0.07	7.9-8.4	<4	Low-----	0.15	5	1	<.5
	3-18	18-27	1.35-1.55	0.6-2.0	0.16-0.18	7.9-9.0	<4	Moderate	0.32			
	18-60	40-50	1.30-1.45	<0.06	0.14-0.16	>9.0	8-16	High-----	0.24			
Sheffit-----	0-3	17-27	1.40-1.60	0.6-2.0	0.19-0.21	>8.4	4-8	Low-----	0.55	5	4L	<1
	3-60	35-50	1.40-1.60	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
Zorravista-----	0-5	0-5	1.45-1.65	>20.0	0.05-0.07	8.5-9.0	4-8	Low-----	0.17	5	1	.5-1
	5-44	0-5	1.45-1.65	>20.0	0.05-0.07	8.5-9.0	<4	Low-----	0.17			
	44-60	27-35	1.50-1.70	<0.06	0.19-0.21	>9.0	<4	Moderate	0.37			
254*:												
Sheffit-----	0-3	17-27	1.40-1.60	0.6-2.0	0.19-0.21	>8.4	4-8	Low-----	0.55	5	4L	<1
	3-60	35-50	1.40-1.60	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
Boofuss-----	0-5	40-50	1.30-1.50	0.06-0.2	0.15-0.17	>8.4	>16	High-----	0.32	5	4	<1
	5-20	35-50	1.35-1.55	0.06-0.2	0.16-0.18	>8.4	>16	High-----	0.37			
	20-60	8-15	1.45-1.60	2.0-6.0	0.14-0.17	8.5-9.0	<2	Low-----	0.32			
255*:												
Sheffit-----	0-3	17-27	1.40-1.60	0.6-2.0	0.19-0.21	>8.4	4-8	Low-----	0.55	5	4L	<1
	3-60	35-50	1.40-1.60	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
Sheffit-----	0-3	17-27	1.40-1.60	0.6-2.0	0.19-0.21	>8.4	4-8	Low-----	0.55	5	4L	<1
	3-60	35-50	1.40-1.60	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
262-----												
Equis	0-6	20-27	1.25-1.45	0.2-0.6	0.19-0.21	8.5-9.0	4-8	Low-----	0.37	5	4L	1-2
	6-30	40-50	1.25-1.45	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
	30-50	30-45	1.35-1.55	<0.06	0.14-0.17	8.5-9.0	4-8	High-----	0.24			
	50-60	20-45	1.45-1.65	0.06-0.2	0.15-0.21	8.5-9.0	<4	High-----	0.32			
266*:												
Equis-----	0-6	40-50	1.25-1.45	<0.06	0.09-0.11	8.5-9.0	8-16	High-----	0.28	5	4	1-2
	6-30	40-50	1.25-1.45	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
	30-50	30-45	1.35-1.55	<0.06	0.14-0.17	8.5-9.0	4-8	High-----	0.24			
	50-60	20-45	1.45-1.65	0.06-0.2	0.15-0.21	8.5-9.0	<4	High-----	0.32			
Equis-----	0-6	40-50	1.25-1.45	<0.06	0.09-0.11	8.5-9.0	8-16	High-----	0.28	5	4	1-2
	6-30	40-50	1.25-1.45	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
	30-50	30-45	1.35-1.55	<0.06	0.14-0.17	8.5-9.0	4-8	High-----	0.24			
	50-60	20-45	1.45-1.65	0.06-0.2	0.15-0.21	8.5-9.0	<4	High-----	0.32			
Kolda-----	0-6	18-25	1.20-1.40	0.6-2.0	0.19-0.21	>8.4	4-8	Moderate	0.55	5	8	3-4
	6-22	22-27	1.30-1.50	0.6-2.0	0.19-0.21	>8.4	4-8	Moderate	0.55			
	22-60	40-50	1.40-1.60	0.06-0.2	0.14-0.17	>8.4	4-8	High-----	0.24			
267*:												
Equis-----	0-6	40-50	1.25-1.45	<0.06	0.09-0.11	8.5-9.0	8-16	High-----	0.28	5	4	1-2
	6-30	40-50	1.25-1.45	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
	30-50	30-45	1.35-1.55	<0.06	0.14-0.17	8.5-9.0	4-8	High-----	0.24			
	50-60	20-45	1.45-1.65	0.06-0.2	0.15-0.21	8.5-9.0	<4	High-----	0.32			
Devilsgait-----	0-10	15-25	1.20-1.30	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.37	5	8	2-4
	10-60	20-35	1.25-1.35	0.2-0.6	0.19-0.21	7.9-8.4	<2	Moderate	0.32			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
270*:												
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
Maderbak-----	0-3	25-35	1.30-1.50	0.2-0.6	0.09-0.11	7.4-8.4	<2	Moderate	0.15	2	8	1-2
	3-17	35-50	1.25-1.45	0.2-0.6	0.08-0.10	7.4-8.4	<2	Moderate	0.10			
	17-29	35-50	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Moderate	0.10			
	29	---	---	0.0-0.01	---	---	---	---	---			
Rubble land-----	0-60	0	---	>20	0.-0.1	---	<2	Low-----	---	---	8	<.1
271*:												
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
275*:												
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
Upatad-----	0-3	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	3-15	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	15	---	---	0.0-0.01	---	---	---	---	---			
276*:												
Stewval-----	0-2	12-18	1.35-1.50	2.0-6.0	0.07-0.09	7.4-8.4	<2	Low-----	0.15	1	5	.5-2
	2-10	24-30	1.30-1.45	0.6-2.0	0.04-0.09	7.4-8.4	<2	Low-----	0.10			
	10-14	---	---	0.0-0.01	---	---	---	---	---			
Maderbak-----	0-3	25-35	1.30-1.50	0.2-0.6	0.09-0.11	7.4-8.4	<2	Moderate	0.15	2	8	1-2
	3-17	35-50	1.25-1.45	0.2-0.6	0.08-0.10	7.4-8.4	<2	Moderate	0.10			
	17-29	35-50	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Moderate	0.10			
	29	---	---	0.0-0.01	---	---	---	---	---			
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
279*:												
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
Broland-----	0-3	10-25	1.15-1.35	0.6-2.0	0.10-0.12	7.9-8.4	<2	Low-----	0.15	1	7	1-2
	3-9	27-40	1.35-1.55	0.2-0.6	0.05-0.07	7.9-8.4	<2	Low-----	0.15			
	9-16	20-35	1.40-1.60	0.6-2.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05			
	16-19	10-20	1.45-1.65	2.0-6.0	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
	19-40	---	---	0.0-0.01	---	---	---	---	---			
	40-60	1-5	1.50-1.65	>20	0.03-0.05	7.9-8.4	<2	Low-----	0.02			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		Pct
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					
279*: Yody-----	0-3	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	3-16	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	16-38	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	38-60	---	---	0.0-0.01	---	---	---	---	---			
282----- Palinor	0-10	10-18	1.30-1.50	0.6-2.0	0.05-0.11	7.9-9.0	<2	Low-----	0.15	1	6	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
283*: Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
286*: Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	---	---			
287*: Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Wintermute-----	0-2	8-18	1.35-1.55	0.6-2.0	0.12-0.18	7.9-8.4	<2	Low-----	0.28	2	5	<.8
	2-11	8-18	1.40-1.60	0.6-2.0	0.10-0.16	7.9-9.0	<2	Low-----	0.28			
	11-60	8-18	1.45-1.65	0.06-0.2	0.03-0.07	7.9-9.0	<2	Low-----	0.05			
288*: Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	---	---			
Broland-----	0-3	10-25	1.15-1.35	0.6-2.0	0.10-0.12	7.9-8.4	<2	Low-----	0.15	1	7	1-2
	3-9	27-40	1.35-1.55	0.2-0.6	0.05-0.07	7.9-8.4	<2	Low-----	0.15			
	9-16	20-35	1.40-1.60	0.6-2.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05			
	16-19	10-20	1.45-1.65	2.0-6.0	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
	19-40	---	---	0.0-0.01	---	---	---	---	---			
	40-60	1-5	1.50-1.65	>20	0.03-0.05	7.9-8.4	<2	Low-----	0.02			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
290*:												
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	-----	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	-----	---			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
291*:												
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	-----	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Borvant-----	0-2	10-18	1.10-1.15	0.6-2.0	0.10-0.14	7.4-9.0	<2	Low-----	0.17	1	5	1-2
	2-19	10-18	1.15-1.25	0.6-2.0	0.08-0.12	7.9-9.0	<2	Low-----	0.15			
	19-43	---	---	---	---	---	---	-----	---			
Biken-----	0-9	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	9-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	-----	---			
	30	---	---	0.0-0.01	---	---	---	-----	---			
292*:												
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	-----	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	-----	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Urmafot-----	0-9	18-27	1.25-1.45	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20	1	6	2-4
	9-32	---	---	0.0-0.01	---	---	---	-----	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
295*:												
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	-----	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Roden-----	0-2	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	2-11	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	11	---	---	0.0-0.01	---	---	---	-----	---			
Roden-----	0-1	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	1-8	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	8-12	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
296*:												
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.05-0.11	7.9-9.0	<2	Low-----	0.15	1	6	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
297*:												
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Amelar-----	0-6	18-27	1.05-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	5	7	2-4
	6-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
Izar-----	0-3	18-25	1.15-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	1	6	1-2
	3-14	18-25	1.20-1.30	0.6-2.0	0.05-0.11	7.4-8.4	<2	Low-----	0.10			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
300*:												
Playas-----	0-6	35-70	---	<0.06	0.02-0.04	>8.4	>16	High-----	0.37	5	5	<.1
	6-60	35-70	---	<0.06	0.02-0.04	>8.4	>16	High-----	0.37			
Orupa-----	0-4	40-55	1.20-1.35	0.6-2.0	0.13-0.15	7.9-9.0	<4	High-----	0.49	5	4L	2-3
	4-60	35-45	1.25-1.45	0.6-2.0	0.14-0.16	7.9-9.0	<8	High-----	0.43			
310*:												
Dune land-----	0-6	0-1	---	>6.0	0.04-0.05	---	<2	Low-----	0.15	5	1	<.1
	6-60	0-1	---	>6.0	0.03-0.05	---	<2	Low-----	0.10			
Playas-----	0-6	35-70	---	<0.06	0.02-0.04	>8.4	>16	High-----	0.37	5	5	<.1
	6-60	35-70	---	<0.06	0.02-0.04	>8.4	>16	High-----	0.37			
321*:												
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
322*:												
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
322*: Roden-----	0-1	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	1-8	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	8-12	---	---	0.0-0.01	---	---	---	---	---			
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
323*: Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Bobs-----	0-3	10-20	1.15-1.35	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.15	1	6	1-3
	3-14	10-20	1.25-1.45	0.6-2.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
326*: Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Urmafot-----	0-9	18-27	1.25-1.45	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20	1	6	2-4
	9-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Roden-----	0-1	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	1-8	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	8-12	---	---	0.0-0.01	---	---	---	---	---			
327*: Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Cassiro-----	0-5	10-20	1.30-1.50	0.6-2.0	0.10-0.12	6.1-7.3	<2	Low-----	0.17	5	6	1-2
	5-60	40-50	1.30-1.50	0.2-0.6	0.05-0.06	6.1-7.3	<2	Moderate	0.10			
Biken-----	0-5	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	5-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	---	---			
	30-34	---	---	0.0-0.01	---	---	---	---	---			
328*: Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm		K	T		Pct
328*:												
Tecomar-----	0-3	18-27	1.30-1.45	0.6-2.0	0.03-0.07	7.9-9.0	<2	Low-----	0.17	1	8	1-2
	3-18	20-27	1.30-1.45	0.6-2.0	0.04-0.09	7.9-9.0	<2	Low-----	0.10			
	18-22	---	---	0.0-0.01	---	---	---	---	---			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			
334*:												
Parisa-----	0-4	8-18	1.50-1.65	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.20	2	5	1-2
	4-26	8-18	1.50-1.70	0.6-2.0	0.04-0.12	7.9-9.0	<2	Low-----	0.10			
	26-47	---	---	0.0-0.01	---	---	<2	---	---			
	47-60	0-8	1.60-1.75	6.0-20	0.03-0.11	7.9-9.0	<2	Low-----	0.02			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	---	---			
336-----												
Parisa	0-4	8-18	1.50-1.65	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.20	2	5	1-2
	4-26	8-18	1.50-1.70	0.6-2.0	0.04-0.12	7.9-9.0	<2	Low-----	0.10			
	26-47	---	---	0.0-0.01	---	---	<2	---	---			
	47-60	0-8	1.60-1.75	6.0-20	0.03-0.11	7.9-9.0	<2	Low-----	0.02			
337*:												
Parisa-----	0-4	8-18	1.50-1.65	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.20	2	5	1-2
	4-26	8-18	1.50-1.70	0.6-2.0	0.04-0.12	7.9-9.0	<2	Low-----	0.10			
	26-47	---	---	0.0-0.01	---	---	<2	---	---			
	47-60	0-8	1.60-1.75	6.0-20	0.03-0.11	7.9-9.0	<2	Low-----	0.02			
Wintermute-----	0-2	8-18	1.35-1.55	0.6-2.0	0.12-0.18	7.9-8.4	<2	Low-----	0.28	5	5	<.8
	2-11	8-18	1.40-1.60	0.6-2.0	0.10-0.16	7.9-9.0	<2	Low-----	0.28			
	11-60	8-18	1.45-1.65	0.06-0.2	0.03-0.07	7.9-9.0	<2	Low-----	0.05			
338*:												
Parisa-----	0-4	8-18	1.50-1.65	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.20	2	5	1-2
	4-26	8-18	1.50-1.70	0.6-2.0	0.04-0.12	7.9-9.0	<2	Low-----	0.10			
	26-47	---	---	0.0-0.01	---	---	<2	---	---			
	47-60	0-8	1.60-1.75	6.0-20	0.03-0.11	7.9-9.0	<2	Low-----	0.02			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
340*:												
Izar-----	0-3	18-25	1.15-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	1	6	1-2
	3-14	18-25	1.20-1.30	0.6-2.0	0.05-0.11	7.4-8.4	<2	Low-----	0.10			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
Izar-----	0-3	18-25	1.15-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	1	6	1-2
	3-14	18-25	1.20-1.30	0.6-2.0	0.05-0.11	7.4-8.4	<2	Low-----	0.10			
	14-18	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
346*:												
Izar-----	0-3	18-25	1.15-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	1	6	1-2
	3-14	18-25	1.20-1.30	0.6-2.0	0.05-0.11	7.4-8.4	<2	Low-----	0.10			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
Roden-----	0-2	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	2-11	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	11	---	---	0.0-0.01	---	---	---	---	---			
Zerk-----	0-3	12-17	1.30-1.50	2.0-6.0	0.13-0.15	7.9-9.0	<2	Low-----	0.20	2	5	<1
	3-12	12-17	1.35-1.55	2.0-6.0	0.11-0.13	7.9-9.0	<2	Low-----	0.17			
	12-60	0-10	1.50-1.65	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
351*:												
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
353-----												
Heist	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
356*:												
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Wintermute-----	0-2	8-18	1.35-1.55	0.6-2.0	0.12-0.18	7.9-8.4	<2	Low-----	0.28	5	5	<.8
	2-11	8-18	1.40-1.60	0.6-2.0	0.10-0.16	7.9-9.0	<2	Low-----	0.28			
	11-60	8-18	1.45-1.65	0.06-0.2	0.03-0.07	7.9-9.0	<2	Low-----	0.05			
360*:												
Belmill-----	0-3	7-15	1.30-1.50	0.6-2.0	0.10-0.14	6.6-7.3	<2	Low-----	0.17	2	6	1-2
	3-13	20-27	1.35-1.55	0.6-2.0	0.11-0.15	6.6-7.8	<2	Moderate	0.20			
	13-19	18-27	1.35-1.55	0.6-2.0	0.04-0.08	6.6-7.8	<2	Low-----	0.10			
	19-30	15-20	1.40-1.60	2.0-6.0	0.04-0.07	6.6-8.4	<2	Low-----	0.10			
	30-60	5-10	1.50-1.70	6.0-20	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
Belmill-----	0-3	5-15	1.40-1.60	2.0-6.0	0.07-0.09	6.6-7.3	<2	Low-----	0.17	2	4	1-2
	3-13	20-27	1.35-1.55	0.6-2.0	0.11-0.15	6.6-7.8	<2	Moderate	0.20			
	13-19	18-27	1.35-1.55	0.6-2.0	0.04-0.08	6.6-7.8	<2	Low-----	0.10			
	19-30	15-20	1.40-1.60	2.0-6.0	0.04-0.07	6.6-8.4	<2	Low-----	0.10			
	30-60	5-10	1.50-1.70	6.0-20	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
361*:												
Belmill-----	0-3	7-15	1.30-1.50	0.6-2.0	0.10-0.14	6.6-7.3	<2	Low-----	0.17	2	6	1-2
	3-13	20-27	1.35-1.55	0.6-2.0	0.11-0.15	6.6-7.8	<2	Moderate	0.20			
	13-19	18-27	1.35-1.55	0.6-2.0	0.04-0.08	6.6-7.8	<2	Low-----	0.10			
	19-30	15-20	1.40-1.60	2.0-6.0	0.04-0.07	6.6-8.4	<2	Low-----	0.10			
	30-60	5-10	1.50-1.70	6.0-20	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
Cowgil-----	0-4	10-20	1.30-1.50	2.0-6.0	0.05-0.08	7.4-8.4	<2	Low-----	0.10	5	5	1-2
	4-21	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.05			
	21-61	2-10	1.50-1.65	>20	0.03-0.04	7.9-9.0	<2	Low-----	0.02			
Selti-----	0-4	5-16	1.30-1.50	2.0-6.0	0.05-0.07	7.4-8.4	<2	Low-----	0.10	5	8	1-2
	4-30	18-25	1.40-1.60	0.6-2.0	0.07-0.10	7.4-8.4	<2	Low-----	0.10			
	30-60	1-5	1.45-1.65	6.0-20	0.04-0.06	7.9-8.4	<2	Low-----	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
372----- Automal	0-12	15-25	1.30-1.50	0.6-2.0	0.14-0.18	7.9-9.0	<2	Low-----	0.20	5	5	1-2
	12-32	10-20	1.40-1.60	0.06-0.2	0.04-0.06	7.9-9.0	<2	Low-----	0.02			
	32-60	5-15	1.50-1.70	0.06-0.2	0.03-0.05	7.9-9.0	<2	Low-----	0.02			
373*: Automal-----	0-12	15-25	1.30-1.50	0.6-2.0	0.14-0.18	7.9-9.0	<2	Low-----	0.20	5	5	1-2
	12-32	10-20	1.40-1.60	0.06-0.2	0.04-0.06	7.9-9.0	<2	Low-----	0.02			
	32-60	5-15	1.50-1.70	0.06-0.2	0.03-0.05	7.9-9.0	<2	Low-----	0.02			
Wintermute-----	0-2	8-18	1.35-1.55	0.6-2.0	0.12-0.18	7.9-8.4	<2	Low-----	0.28	5	5	<.8
	2-11	8-18	1.40-1.60	0.6-2.0	0.10-0.16	7.9-9.0	<2	Low-----	0.28			
	11-60	8-18	1.45-1.65	0.06-0.2	0.03-0.07	7.9-9.0	<2	Low-----	0.05			
380*: Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Parisa-----	0-4	8-18	1.50-1.65	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.20	2	5	1-2
	4-26	8-18	1.50-1.70	0.6-2.0	0.04-0.12	7.9-9.0	<2	Low-----	0.10			
	26-47	---	---	0.0-0.01	---	---	<2	---	---			
	47-60	0-8	1.60-1.75	6.0-20	0.03-0.11	7.9-9.0	<2	Low-----	0.02			
411*: Cassiro-----	0-5	10-20	1.30-1.50	0.6-2.0	0.10-0.12	6.1-7.3	<2	Low-----	0.17	5	6	1-2
	5-60	40-50	1.30-1.50	0.2-0.6	0.05-0.06	6.1-7.3	<2	Moderate	0.10			
Cassiro-----	0-5	10-20	1.30-1.50	0.6-2.0	0.10-0.12	6.1-7.3	<2	Low-----	0.17	5	6	1-2
	5-60	40-50	1.30-1.50	0.2-0.6	0.05-0.06	6.1-7.3	<2	Moderate	0.10			
413*: Cassiro-----	0-5	10-20	1.30-1.50	0.6-2.0	0.10-0.12	6.1-7.3	<2	Low-----	0.17	5	6	1-2
	5-60	40-50	1.30-1.50	0.2-0.6	0.05-0.06	6.1-7.3	<2	Moderate	0.10			
Fax-----	0-3	8-18	1.40-1.60	2.0-6.0	0.04-0.07	7.4-8.4	<2	Low-----	0.10	2	6	2-4
	3-12	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.15			
	12-22	14-28	1.40-1.60	0.2-0.6	0.06-0.09	7.9-8.4	<2	Low-----	0.15			
	22-48	---	---	0.0-0.01	---	---	---	---	---			
Belmill-----	0-3	5-15	1.40-1.60	2.0-6.0	0.07-0.09	6.6-7.3	<2	Low-----	0.17	2	4	1-2
	3-13	20-27	1.35-1.55	0.6-2.0	0.11-0.15	6.6-7.8	<2	Moderate	0.20			
	13-19	18-27	1.35-1.55	0.6-2.0	0.04-0.08	6.6-7.8	<2	Low-----	0.10			
	19-30	15-20	1.40-1.60	2.0-6.0	0.04-0.07	6.6-8.4	<2	Low-----	0.10			
	30-60	5-10	1.50-1.70	6.0-20	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
414*: Cassiro-----	0-5	10-20	1.30-1.50	0.6-2.0	0.10-0.12	6.1-7.3	<2	Low-----	0.17	5	6	1-2
	5-60	40-50	1.30-1.50	0.2-0.6	0.05-0.06	6.1-7.3	<2	Moderate	0.10			
Belmill-----	0-3	7-15	1.30-1.50	0.6-2.0	0.10-0.14	6.6-7.3	<2	Low-----	0.17	2	6	1-2
	3-13	20-27	1.35-1.55	0.6-2.0	0.11-0.15	6.6-7.8	<2	Moderate	0.20			
	13-19	18-27	1.35-1.55	0.6-2.0	0.04-0.08	6.6-7.8	<2	Low-----	0.10			
	19-30	15-20	1.40-1.60	2.0-6.0	0.04-0.07	6.6-8.4	<2	Low-----	0.10			
	30-60	5-10	1.50-1.70	6.0-20	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
421----- Wintermute	0-2	12-18	1.40-1.60	0.6-2.0	0.10-0.15	7.9-8.4	<2	Low-----	0.20	5	4	<.6
	2-11	8-18	1.40-1.60	0.6-2.0	0.10-0.16	7.9-9.0	<2	Low-----	0.28			
	11-60	8-18	1.45-1.65	0.06-0.2	0.03-0.07	7.9-9.0	<2	Low-----	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
425*:												
Wintermute-----	0-2	2-10	1.45-1.65	6.0-20	0.01-0.08	7.9-8.4	<2	Low-----	0.17	5	2	<.5
	2-11	8-18	1.40-1.60	0.6-2.0	0.10-0.16	7.9-9.0	<2	Low-----	0.28			
	11-60	8-18	1.45-1.65	0.06-0.2	0.03-0.07	7.9-9.0	<2	Low-----	0.05			
Wintermute-----	0-2	8-18	1.35-1.55	0.6-2.0	0.12-0.18	7.9-8.4	<2	Low-----	0.28	5	5	<.8
	2-11	8-18	1.40-1.60	0.6-2.0	0.10-0.16	7.9-9.0	<2	Low-----	0.28			
	11-60	8-18	1.45-1.65	0.06-0.2	0.03-0.07	7.9-9.0	<2	Low-----	0.05			
434*:												
Pockaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			
Hyzen-----	0-2	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	2-12	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	12	---	---	0.0-0.01	---	---	---	---	---			
Hyzen-----	0-1	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	1-6	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	6-10	---	---	0.0-0.01	---	---	---	---	---			
436*:												
Pockaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			
Hyzen-----	0-2	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	2-12	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	12	---	---	0.0-0.01	---	---	---	---	---			
Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.12-0.14	7.9-9.0	<2	Low-----	0.15	2	8	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	---	---			
437*:												
Pockaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
440*:												
Hessing-----	0-4	15-20	1.25-1.45	0.6-2.0	0.19-0.21	7.9-9.0	2-4	Low-----	0.55	3	5	<.5
	4-14	15-20	1.50-1.70	0.6-2.0	0.19-0.21	8.5-9.0	2-4	Low-----	0.49			
	14-31	15-27	1.40-1.55	0.6-2.0	0.14-0.16	8.5-9.0	4-16	Low-----	0.32			
	31-60	0-5	1.50-1.70	>20	0.03-0.06	7.9-9.0	>16	Low-----	0.05			
Zerk-----	0-3	12-17	1.30-1.50	2.0-6.0	0.13-0.15	7.9-9.0	<2	Low-----	0.20	2	5	<1
	3-12	12-17	1.35-1.55	2.0-6.0	0.11-0.13	7.9-9.0	<2	Low-----	0.17			
	12-60	0-10	1.50-1.65	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm		K	T	group	Pct
450*: Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	-----	---			
Yody-----	0-3	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	3-16	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	16-38	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	38-60	---	---	0.0-0.01	---	---	---	-----	---			
455*: Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	-----	---			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
Linoyer-----	0-4	12-18	1.30-1.50	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	5	3	.5-1
	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
458*: Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	-----	---			
Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	-----	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
471*: Hessing-----	0-4	15-20	1.25-1.45	0.6-2.0	0.19-0.21	7.9-9.0	2-4	Low-----	0.55	3	5	<.5
	4-14	15-20	1.50-1.70	0.6-2.0	0.19-0.21	8.5-9.0	2-4	Low-----	0.49			
	14-31	15-27	1.40-1.55	0.6-2.0	0.14-0.16	8.5-9.0	4-16	Low-----	0.32			
	31-60	0-5	1.50-1.70	>20	0.03-0.06	7.9-9.0	>16	Low-----	0.05			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
472*: Broyles-----	0-12	5-15	1.35-1.55	0.6-2.0	0.13-0.16	7.9-9.0	2-4	Low-----	0.55	5	3	<1
	12-60	5-15	1.40-1.60	2.0-6.0	0.09-0.11	>8.4	4-16	Low-----	0.24			
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
473*: Broyles-----	0-12	5-15	1.35-1.55	0.6-2.0	0.13-0.16	7.9-9.0	2-4	Low-----	0.55	5	3	<1
	12-60	5-15	1.40-1.60	2.0-6.0	0.09-0.11	>8.4	4-16	Low-----	0.24			
Sheffit-----	0-3	17-27	1.40-1.60	0.6-2.0	0.19-0.21	>8.4	4-8	Low-----	0.55	5	4L	<1
	3-60	35-50	1.40-1.60	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
473*: Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
480*: Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	-----	---			
Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	-----	---			
481*: Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	-----	---			
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	-----	---			
483*: Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	-----	---			
Upatad-----	0-3	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	3-15	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	15	---	---	0.0-0.01	---	---	---	-----	---			
Birchcreek-----	0-3	15-25	1.20-1.30	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	2	8	1-3
	3-10	28-35	1.35-1.45	0.2-0.6	0.09-0.12	6.6-7.8	<2	Moderate	0.10			
	10-28	40-55	1.25-1.40	0.06-0.2	0.07-0.11	6.6-7.8	<2	High-----	0.05			
	28-32	---	---	---	---	---	---	-----	---			
484*: Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	-----	---			
Birchcreek-----	0-3	15-25	1.20-1.30	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	2	8	1-3
	3-10	28-35	1.35-1.45	0.2-0.6	0.09-0.12	6.6-7.8	<2	Moderate	0.10			
	10-28	40-55	1.25-1.40	0.06-0.2	0.07-0.11	6.6-7.8	<2	High-----	0.05			
	28-32	---	---	---	---	---	---	-----	---			
Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	-----	---			
486*: Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
486*: Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	---	---			
Upatad-----	0-3	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	3-15	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	15	---	---	0.0-0.01	---	---	---	---	---			
489*: Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	---	---			
McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.08-0.17	6.6-7.3	<2	Low-----	0.17	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Moderate	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Birchcreek-----	0-3	15-25	1.20-1.30	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	2	8	1-3
	3-10	28-35	1.35-1.45	0.2-0.6	0.09-0.12	6.6-7.8	<2	Moderate	0.10			
	10-28	40-55	1.25-1.40	0.06-0.2	0.07-0.11	6.6-7.8	<2	High-----	0.05			
	28-32	---	---	---	---	---	---	---	---			
490----- Kunzler	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
491*: Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
500*: Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.10-0.15	6.6-7.3	<2	Moderate	0.05	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Low-----	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Hutchley-----	0-3	12-25	1.15-1.25	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	1	7	2-3
	3-12	28-35	1.40-1.50	0.2-0.6	0.09-0.11	6.6-7.8	<2	Moderate	0.10			
	12-16	---	---	---	---	---	---	---	---			
510*: Onkeyo-----	0-8	18-27	1.10-1.30	0.6-2.0	0.06-0.13	7.4-8.4	<2	Low-----	0.10	1	6	2-4
	8-15	27-35	1.20-1.40	0.2-0.6	0.04-0.10	7.4-8.4	<2	Low-----	0.05			
	15	---	---	0.0-0.01	---	---	---	---	---			
Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.12-0.14	7.9-9.0	<2	Low-----	0.15	2	8	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
510*: Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	-----	---			
520*: McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.10-0.15	6.6-7.3	<2	Moderate	0.05	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Low-----	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	-----	---			
531*: Duffer-----	0-6	20-27	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Moderate	0.49	5	4L	<1
	6-60	20-35	1.35-1.55	0.6-2.0	0.19-0.21	>7.8	>8	Moderate	0.49			
Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
534*: Duffer-----	0-6	20-27	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Moderate	0.49	5	4L	<1
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>8	Moderate	0.49			
Duffer-----	0-6	15-20	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Low-----	0.37	5	4L	1-3
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>16	Moderate	0.43			
Kolda-----	0-6	18-25	1.20-1.40	0.6-2.0	0.19-0.21	>8.4	4-8	Moderate	0.55	5	8	3-4
	6-22	22-27	1.30-1.50	0.6-2.0	0.19-0.21	>8.4	4-8	Moderate	0.55			
	22-60	40-50	1.40-1.60	0.06-0.2	0.14-0.17	>8.4	4-8	High-----	0.24			
540*: Kolda-----	0-6	18-25	1.20-1.40	0.6-2.0	0.19-0.21	>8.4	4-8	Moderate	0.55	5	8	3-4
	6-22	22-27	1.30-1.50	0.6-2.0	0.19-0.21	>8.4	4-8	Moderate	0.55			
	22-60	40-50	1.40-1.60	0.06-0.2	0.14-0.17	>8.4	4-8	High-----	0.24			
Sheffit-----	0-3	17-27	1.40-1.60	0.6-2.0	0.19-0.21	>8.4	4-8	Low-----	0.55	5	4L	<1
	3-60	35-50	1.40-1.60	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
Equis-----	0-6	20-27	1.25-1.45	0.2-0.6	0.19-0.21	8.5-9.0	4-8	Low-----	0.37	5	4L	1-2
	6-30	40-50	1.25-1.45	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
	30-50	30-45	1.35-1.55	<0.06	0.14-0.17	8.5-9.0	4-8	High-----	0.24			
	50-60	20-45	1.45-1.65	0.06-0.2	0.15-0.21	8.5-9.0	<4	High-----	0.32			
541*: Kolda-----	0-6	18-25	1.20-1.40	0.6-2.0	0.19-0.21	>8.4	4-8	Moderate	0.55	5	8	3-4
	6-22	22-27	1.30-1.50	0.6-2.0	0.19-0.21	>8.4	4-8	Moderate	0.55			
	22-60	40-50	1.40-1.60	0.06-0.2	0.14-0.17	>8.4	4-8	High-----	0.24			
Duffer-----	0-6	15-20	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Low-----	0.37	5	4L	1-3
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>16	Moderate	0.43			
542*: Devilsgait-----	0-10	15-25	1.20-1.30	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.37	5	8	2-4
	10-60	20-35	1.25-1.35	0.2-0.6	0.19-0.21	7.9-8.4	<2	Moderate	0.32			
Devilsgait-----	0-10	15-25	1.20-1.30	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.37	5	8	2-4
	10-60	20-35	1.25-1.35	0.2-0.6	0.19-0.21	7.9-8.4	<2	Moderate	0.32			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
542*: Duffer-----	0-6	15-20	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Low-----	0.37	5	4L	1-3
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>16	Moderate	0.43			
550*: Molion-----	0-2	8-15	1.35-1.55	2.0-6.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05	1	5	1-2
	2-14	8-18	1.30-1.40	0.6-2.0	0.05-0.07	7.9-9.0	<2	Low-----	0.05			
	14-25	---	---	0.0-0.01	---	---	---	-----	---			
Unsel-----	0-4	15-20	1.35-1.55	2.0-6.0	0.10-0.13	7.9-9.0	<2	Low-----	0.20	3	4	<.5
	4-14	27-35	1.25-1.45	0.2-0.6	0.10-0.17	7.4-9.0	<2	Moderate	0.20			
	14-22	10-25	1.35-1.55	0.6-2.0	0.07-0.12	8.5-9.0	4-8	Low-----	0.20			
	22-60	2-8	1.50-1.70	6.0-20.0	0.03-0.05	8.5-9.0	4-8	Low-----	0.05			
Breko-----	0-5	5-18	1.40-1.55	2.0-6.0	0.10-0.12	7.9-9.0	<2	Low-----	0.24	5	4	1-2
	5-9	25-35	1.40-1.60	0.2-0.6	0.12-0.15	7.9-9.0	<2	Moderate	0.15			
	9-26	25-35	1.40-1.60	0.2-0.6	0.05-0.08	7.9-9.0	<2	Moderate	0.15			
	26-60	5-15	1.50-1.70	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
552----- Molion	0-2	8-15	1.35-1.55	2.0-6.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05	1	5	1-2
	2-14	8-18	1.30-1.40	0.6-2.0	0.05-0.07	7.9-9.0	<2	Low-----	0.05			
	14-25	---	---	0.0-0.01	---	---	---	-----	---			
561*: McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.10-0.15	6.6-7.3	<2	Moderate	0.05	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Low-----	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	-----	---			
Upatad-----	0-3	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	3-15	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	15	---	---	0.0-0.01	---	---	---	-----	---			
564*: McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.10-0.15	6.6-7.3	<2	Moderate	0.05	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Low-----	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Chen-----	0-7	15-25	1.10-1.25	0.6-2.0	0.07-0.08	6.1-7.8	<2	Low-----	0.15	1	8	2-3
	7-17	40-55	1.25-1.40	<0.06	0.05-0.06	6.1-7.8	<2	Moderate	0.10			
	17-21	---	---	0.0-0.01	---	---	---	-----	---			
Suak-----	0-10	10-20	1.20-1.40	0.6-2.0	0.04-0.07	6.6-7.3	<2	Low-----	0.05	2	8	2-5
	10-25	20-27	1.30-1.50	0.6-2.0	0.03-0.06	7.4-7.8	<2	Moderate	0.02			
	25	---	---	0.0-0.01	---	---	---	-----	---			
566*: McIvey-----	0-5	20-27	1.05-1.20	0.6-2.0	0.12-0.15	6.6-7.3	<2	Moderate	0.15	5	7	2-5
	5-12	20-27	1.15-1.35	0.6-2.0	0.10-0.12	6.6-7.3	<2	Moderate	0.15			
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Moderate	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
566*: Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	-----	---			
567*: McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.11-0.15	6.6-7.3	<2	Low-----	0.17	5	7	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Moderate	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Birchcreek-----	0-3	15-25	1.20-1.30	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	2	8	1-3
	3-10	28-35	1.35-1.45	0.2-0.6	0.09-0.12	6.6-7.8	<2	Moderate	0.10			
	10-28	40-55	1.25-1.40	0.06-0.2	0.07-0.11	6.6-7.8	<2	High-----	0.05			
	28-32	---	---	---	---	---	---	-----	---			
Hutchley-----	0-3	12-25	1.15-1.25	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	1	7	2-3
	3-12	28-35	1.40-1.50	0.2-0.6	0.09-0.11	6.6-7.8	<2	Moderate	0.10			
	12-16	---	---	---	---	---	---	-----	---			
570*: Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	-----	---			
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
McConnel-----	0-3	7-15	1.35-1.50	2.0-6.0	0.12-0.15	6.6-8.4	<2	Low-----	0.32	2	4	1-2
	3-11	5-15	1.40-1.60	2.0-6.0	0.12-0.15	6.6-8.4	<2	Low-----	0.32			
	11-42	0-5	1.45-1.60	>20	0.03-0.05	>7.8	>2	Low-----	0.02			
	42-60	5-15	1.40-1.60	2.0-6.0	0.10-0.13	>7.8	>2	Low-----	0.20			
573*: Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	-----	---			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	-----	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	-----	---			
575*: Yody-----	0-3	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	3-16	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	16-38	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	38-60	---	---	0.0-0.01	---	---	---	-----	---			
Broyles-----	0-12	5-15	1.35-1.55	0.6-2.0	0.13-0.16	7.9-9.0	2-4	Low-----	0.55	5	3	<1
	12-60	5-15	1.40-1.60	2.0-6.0	0.09-0.11	>8.4	4-16	Low-----	0.24			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
578----- Yody	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	-----	---			
580*: Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
Kelk-----	0-4	15-20	1.15-1.30	0.6-2.0	0.15-0.17	6.6-8.4	<4	Low-----	0.49	5	3	1-2
	4-32	18-27	1.40-1.60	0.06-0.2	0.19-0.21	7.4-8.4	<8	Moderate	0.49			
	32-60	18-27	1.40-1.60	0.6-2.0	0.18-0.20	8.5-9.0	4-16	Moderate	0.49			
590*: Raph-----	0-4	18-25	1.40-1.60	0.6-2.0	0.16-0.18	7.9-9.0	<4	Moderate	0.37	5	5	<.5
	4-30	20-27	1.40-1.60	0.6-2.0	0.18-0.20	7.9-9.0	<4	Moderate	0.37			
	30-42	15-20	1.50-1.65	2.0-6.0	0.08-0.10	7.9-9.0	<4	Low-----	0.20			
	42-60	6-15	1.50-1.70	2.0-6.0	0.06-0.08	7.9-9.0	<4	Low-----	0.10			
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
Zimwala-----	0-13	20-27	1.30-1.50	0.6-2.0	0.19-0.21	8.5-9.0	8-16	Moderate	0.43	5	4L	<1
	13-40	25-35	1.30-1.50	0.06-0.2	0.19-0.21	>8.4	>16	Moderate	0.37			
	40-60	40-50	1.50-1.70	<0.06	0.15-0.17	>9.0	>16	High-----	0.28			
602*: Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Nyak-----	0-9	10-18	1.30-1.50	2.0-6.0	0.13-0.15	7.9-8.4	<2	Low-----	0.32	5	3	1-2
	9-14	10-18	1.40-1.60	2.0-6.0	0.13-0.15	7.9-8.4	<2	Low-----	0.32			
	14-60	10-18	1.45-1.65	0.2-0.6	0.15-0.18	7.9-9.0	<2	Moderate	0.28			
Raph-----	0-4	18-25	1.40-1.60	0.6-2.0	0.16-0.18	7.9-9.0	<4	Moderate	0.37	5	5	<.5
	4-30	20-27	1.40-1.60	0.6-2.0	0.18-0.20	7.9-9.0	<4	Moderate	0.37			
	30-42	15-20	1.50-1.65	2.0-6.0	0.08-0.10	7.9-9.0	<4	Low-----	0.20			
	42-60	6-15	1.50-1.70	2.0-6.0	0.06-0.08	7.9-9.0	<4	Low-----	0.10			
603*: Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-36	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
	36-60	12-18	1.40-1.60	0.06-0.2	0.10-0.14	7.9-9.0	2-4	Low-----	0.28			
Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
605*: Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
605*:												
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Tosser-----	0-8	12-18	1.30-1.50	0.6-2.0	0.14-0.18	7.9-8.4	<2	Low-----	0.28	5	4L	1-2
	8-16	12-18	1.40-1.60	0.6-2.0	0.06-0.12	7.9-9.0	<2	Low-----	0.10			
	16-24	2-8	1.50-1.70	6.0-20	0.03-0.05	>8.4	<4	Low-----	0.02			
	24-60	2-8	1.50-1.70	2.0-6.0	0.03-0.05	>8.4	<4	Low-----	0.02			
610*:												
Broyles-----	0-12	5-15	1.35-1.55	0.6-2.0	0.13-0.16	7.9-9.0	2-4	Low-----	0.55	5	3	<1
	12-60	5-15	1.40-1.60	2.0-6.0	0.09-0.11	>8.4	4-16	Low-----	0.24			
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Unsel-----	0-4	15-20	1.35-1.55	2.0-6.0	0.10-0.13	7.9-9.0	<2	Low-----	0.20	3	4	<.5
	4-14	27-35	1.25-1.45	0.2-0.6	0.10-0.17	7.4-9.0	<2	Moderate	0.20			
	14-22	10-25	1.35-1.55	0.6-2.0	0.07-0.12	8.5-9.0	4-8	Low-----	0.20			
	22-60	2-8	1.50-1.70	6.0-20.0	0.03-0.05	8.5-9.0	4-8	Low-----	0.05			
620*:												
Unsel-----	0-4	15-20	1.35-1.55	2.0-6.0	0.10-0.13	7.9-9.0	<2	Low-----	0.20	3	4	<.5
	4-14	27-35	1.25-1.45	0.2-0.6	0.10-0.17	7.4-9.0	<2	Moderate	0.20			
	14-22	10-25	1.35-1.55	0.6-2.0	0.07-0.12	8.5-9.0	4-8	Low-----	0.20			
	22-60	2-8	1.50-1.70	6.0-20.0	0.03-0.05	8.5-9.0	4-8	Low-----	0.05			
Broyles-----	0-12	5-15	1.35-1.55	0.6-2.0	0.13-0.16	7.9-9.0	2-4	Low-----	0.55	5	3	<1
	12-60	5-15	1.40-1.60	2.0-6.0	0.09-0.11	>8.4	4-16	Low-----	0.24			
621*:												
Nyala-----	0-3	12-20	1.45-1.60	2.0-6.0	0.10-0.13	7.9-9.0	<4	Low-----	0.20	5	3	<.5
	3-12	27-35	1.30-1.50	0.2-0.6	0.15-0.17	>8.4	<4	Moderate	0.32			
	12-56	12-20	1.55-1.70	0.2-0.6	0.10-0.13	>8.4	<4	Low-----	0.20			
	56-60	3-8	1.55-1.70	6.0-20	0.05-0.08	>8.4	<4	Low-----	0.10			
Breko-----	0-5	5-18	1.40-1.55	2.0-6.0	0.10-0.12	7.9-9.0	<2	Low-----	0.24	5	4	1-2
	5-9	25-35	1.40-1.60	0.2-0.6	0.12-0.15	7.9-9.0	<2	Moderate	0.15			
	9-26	25-35	1.40-1.60	0.2-0.6	0.05-0.08	7.9-9.0	<2	Moderate	0.15			
	26-60	5-15	1.50-1.70	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
Unsel-----	0-4	15-20	1.35-1.55	2.0-6.0	0.10-0.13	7.9-9.0	<2	Low-----	0.20	3	4	<.5
	4-14	27-35	1.25-1.45	0.2-0.6	0.10-0.17	7.4-9.0	<2	Moderate	0.20			
	14-22	10-25	1.35-1.55	0.6-2.0	0.07-0.12	8.5-9.0	4-8	Low-----	0.20			
	22-60	2-8	1.50-1.70	6.0-20.0	0.03-0.05	8.5-9.0	4-8	Low-----	0.05			
630*:												
Molion-----	0-2	8-15	1.35-1.55	2.0-6.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05	1	5	1-2
	2-14	8-18	1.30-1.40	0.6-2.0	0.05-0.07	7.9-9.0	<2	Low-----	0.05			
	14-25	---	---	0.0-0.01	---	---	---	---	---			
Haarvar-----	0-2	35-40	1.15-1.30	0.06-0.2	0.15-0.17	7.9-8.4	<2	High-----	0.28	1	5	.5-.8
	2-10	40-55	1.20-1.40	<0.06	0.12-0.14	7.9-8.4	<2	High-----	0.32			
	10-14	---	---	0.0-0.01	---	---	---	---	---			
Haarvar-----	0-2	35-40	1.15-1.30	0.06-0.2	0.15-0.17	7.9-8.4	<2	High-----	0.28	1	5	.5-.8
	2-10	40-55	1.20-1.40	<0.06	0.12-0.14	7.9-8.4	<2	High-----	0.32			
	10-14	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
631*, 632*:												
Roden-----	0-2	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	2-11	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	11	---	---	0.0-0.01	---	---	---	---	---			
Haarvar-----	0-2	35-40	1.15-1.30	0.06-0.2	0.15-0.17	7.9-8.4	<2	High-----	0.28	1	5	.5-.8
	2-10	40-55	1.20-1.40	<0.06	0.12-0.14	7.9-8.4	<2	High-----	0.32			
	10-14	---	---	0.0-0.01	---	---	---	---	---			
633*:												
Roden-----	0-2	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	2-11	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	11	---	---	0.0-0.01	---	---	---	---	---			
Izar-----	0-3	18-25	1.15-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	1	6	1-2
	3-14	18-25	1.20-1.30	0.6-2.0	0.05-0.11	7.4-8.4	<2	Low-----	0.10			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
Roden-----	0-1	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	1-8	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	8-12	---	---	0.0-0.01	---	---	---	---	---			
640*:												
Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
642*:												
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
Linoyer-----	0-4	12-18	1.30-1.50	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	5	3	.5-1
	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
643*:												
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
Bylo-----	0-4	18-27	1.30-1.50	0.2-0.6	0.19-0.21	7.9-8.4	<4	Moderate	0.55	5	4L	.6-.8
	4-60	18-35	1.30-1.50	0.2-0.6	0.19-0.21	7.9-9.0	4-8	Moderate	0.55			
Zimwala-----	0-13	20-27	1.30-1.50	0.6-2.0	0.19-0.21	8.5-9.0	8-16	Moderate	0.43	5	4L	<1
	13-40	25-35	1.30-1.50	0.06-0.2	0.19-0.21	>8.4	>16	Moderate	0.37			
	40-60	40-50	1.50-1.70	<0.06	0.15-0.17	>9.0	>16	High-----	0.28			
645*:												
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
645*: Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
650*: Eaglepass-----	0-1	8-18	1.20-1.40	2.0-6.0	0.06-0.10	7.9-9.0	<2	Low-----	0.15	1	8	<.5
	1-4	8-18	1.20-1.40	2.0-6.0	0.03-0.05	7.9-9.0	<2	Low-----	0.15			
	4	---	---	0.0-0.01	---	---	---	-----				
Kyler-----	0-3	7-18	1.30-1.45	0.6-2.0	0.04-0.06	7.9-9.0	<2	Low-----	0.15	1	8	.5-1
	3-9	7-18	1.25-1.45	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.15			
	9-13	---	---	0.0-0.01	---	---	---	-----				
Rock outcrop.												
660*: Stewval-----	0-2	12-18	1.35-1.50	2.0-6.0	0.06-0.08	7.4-8.4	<2	Low-----	0.10	1	8	.5-2
	2-10	24-30	1.30-1.45	0.6-2.0	0.04-0.09	7.4-8.4	<2	Low-----	0.10			
	10-14	---	---	0.0-0.01	---	---	---	-----				
Rock outcrop.												
670*: Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.12-0.14	7.9-9.0	<2	Low-----	0.15	2	8	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	-----				
Grink-----	0-7	12-18	1.20-1.40	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.17	1	7	2-5
	7-19	12-18	1.20-1.40	0.6-2.0	0.05-0.12	7.4-8.4	<2	Low-----	0.17			
	19	---	---	0.0-0.01	---	---	---	-----				
Rock outcrop.												
680*: Genaw-----	0-3	15-25	1.30-1.50	0.6-2.0	0.19-0.21	7.4-8.4	<2	Moderate	0.49	1	6	1-2
	3-10	18-30	1.25-1.45	0.6-2.0	0.14-0.17	7.9-8.4	<4	Low-----	0.24			
	10-16	15-24	1.35-1.55	0.6-2.0	0.09-0.14	7.9-9.0	<4	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----				
Puett-----	0-5	10-20	1.30-1.50	2.0-6.0	0.12-0.14	7.9-9.0	<2	Low-----	0.24	1	5	.5-1
	5-14	5-10	1.35-1.55	2.0-6.0	0.13-0.15	7.9-9.0	<2	Low-----	0.15			
	14-18	---	---	0.0-0.01	---	---	---	-----				
Abgese-----	0-4	5-15	1.40-1.50	2.0-6.0	0.10-0.12	7.9-8.4	<2	Low-----	0.17	5	3	.7-1
	4-22	18-30	1.35-1.45	0.6-2.0	0.12-0.15	7.9-8.4	<2	Moderate	0.15			
	22-43	5-10	1.50-1.60	2.0-6.0	0.09-0.11	7.9-8.4	<2	Low-----	0.10			
	43-60	0-5	1.55-1.65	6.0-20	0.06-0.09	8.5-9.0	2-4	Low-----	0.05			
690*: Devilsgait-----	0-9	15-25	1.20-1.30	0.6-2.0	0.19-0.21	7.9-9.0	<4	Moderate	0.37	5	4L	2-4
	9-46	20-35	1.25-1.35	0.2-0.6	0.19-0.21	7.9-9.0	<4	Moderate	0.32			
	46-60	15-25	1.20-1.25	2.0-6.0	0.13-0.15	7.4-8.4	<4	Moderate	0.28			
Cassiro-----	0-5	10-20	1.30-1.50	0.6-2.0	0.10-0.12	6.1-7.3	<2	Low-----	0.17	5	6	1-2
	5-60	40-50	1.30-1.50	0.2-0.6	0.05-0.06	6.1-7.3	<2	Moderate	0.10			
710----- Raph	0-4	18-25	1.40-1.60	0.6-2.0	0.16-0.18	7.9-9.0	<4	Moderate	0.37	5	5	<.5
	4-30	20-27	1.40-1.60	0.6-2.0	0.18-0.20	7.9-9.0	<4	Moderate	0.37			
	30-42	15-20	1.50-1.65	2.0-6.0	0.08-0.10	7.9-9.0	<4	Low-----	0.20			
	42-60	6-15	1.50-1.70	2.0-6.0	0.06-0.08	7.9-9.0	<4	Low-----	0.10			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
730*:												
Zimwala-----	0-13	20-27	1.30-1.50	0.6-2.0	0.19-0.21	8.5-9.0	8-16	Moderate	0.43	5	4L	<1
	13-40	25-35	1.30-1.50	0.06-0.2	0.19-0.21	>8.4	>16	Moderate	0.37			
	40-60	40-50	1.50-1.70	<0.06	0.15-0.17	>9.0	>16	High-----	0.28			
Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
Zimwala-----	0-13	20-27	1.30-1.50	0.6-2.0	0.19-0.21	8.5-9.0	8-16	Moderate	0.43	5	4L	<1
	13-40	25-35	1.30-1.50	0.06-0.2	0.19-0.21	>8.4	>16	Moderate	0.37			
	40-60	40-50	1.50-1.70	<0.06	0.15-0.17	>9.0	>16	High-----	0.28			
731*:												
Zimwala-----	0-13	20-27	1.30-1.50	0.6-2.0	0.19-0.21	8.5-9.0	8-16	Moderate	0.43	5	4L	<1
	13-40	25-35	1.30-1.50	0.06-0.2	0.19-0.21	>8.4	>16	Moderate	0.37			
	40-60	40-50	1.50-1.70	<0.06	0.15-0.17	>9.0	>16	High-----	0.28			
Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
740*:												
Orupa-----	0-4	35-40	1.30-1.45	0.6-2.0	0.19-0.21	7.9-9.0	<4	High-----	0.43	5	4L	2-3
	4-60	35-45	1.25-1.45	0.6-2.0	0.14-0.16	7.9-9.0	<8	High-----	0.43			
Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
741*:												
Orupa-----	0-4	35-40	1.30-1.45	0.6-2.0	0.19-0.21	7.9-9.0	<4	High-----	0.43	5	4L	2-3
	4-60	35-45	1.25-1.45	0.6-2.0	0.14-0.16	7.9-9.0	<8	High-----	0.43			
Orupa-----	0-4	35-40	1.30-1.45	0.6-2.0	0.19-0.21	7.9-9.0	<4	High-----	0.43	5	4L	2-3
	4-60	35-45	1.25-1.45	0.6-2.0	0.14-0.16	7.9-9.0	<8	High-----	0.43			
750*:												
Upatad-----	0-3	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	3-15	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	15	---	---	0.0-0.01	---	---	---	---	---			
Upatad-----	0-1	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	1-14	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
751*:												
Upatad-----	0-3	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	3-15	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	15	---	---	0.0-0.01	---	---	---	---	---			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
752*:												
Upatad-----	0-3	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	3-15	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	15	---	---	0.0-0.01	---	---	---	-----	---			
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	-----	---			
753*:												
Upatad-----	0-3	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	3-15	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	15	---	---	0.0-0.01	---	---	---	-----	---			
Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	-----	---			
Atlow-----	0-2	15-25	1.15-1.35	0.6-2.0	0.06-0.08	7.4-8.4	<2	Low-----	0.17	1	7	1-2
	2-16	27-35	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Low-----	0.17			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
760*:												
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
Upatad-----	0-3	18-27	1.15-1.35	0.6-2.0	0.08-0.14	7.4-7.8	<2	Low-----	0.15	1	7	2-4
	3-15	27-35	1.25-1.45	0.2-0.6	0.08-0.14	7.4-8.4	<2	Low-----	0.10			
	15	---	---	0.0-0.01	---	---	---	-----	---			
Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	-----	---			
762*:												
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
Eoj-----	0-8	20-27	1.30-1.50	0.6-2.0	0.09-0.11	7.4-7.8	<2	Low-----	0.10	1	8	1-3
	8-60	40-60	1.25-1.45	<0.06	0.10-0.12	7.4-8.4	<2	High-----	0.15			
Cassiro-----	0-5	10-20	1.30-1.50	0.6-2.0	0.10-0.12	6.1-7.3	<2	Low-----	0.17	5	6	1-2
	5-60	40-50	1.30-1.50	0.2-0.6	0.05-0.06	6.1-7.3	<2	Moderate	0.10			
763*:												
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
Pioche-----	0-3	5-15	1.35-1.55	0.6-2.0	0.11-0.13	6.6-7.8	<2	Low-----	0.15	1	8	1-3
	3-15	35-50	1.40-1.55	0.06-0.2	0.10-0.12	6.6-7.8	<2	Moderate	0.15			
	15-19	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
763*:												
McIvey-----	0-5	20-27	1.05-1.20	0.6-2.0	0.12-0.15	6.6-7.3	<2	Moderate	0.15	5	7	2-5
	5-12	20-27	1.15-1.35	0.6-2.0	0.10-0.12	6.6-7.3	<2	Moderate	0.15			
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Moderate	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
770*:												
Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	---	---			
Birchcreek-----	0-3	15-25	1.20-1.30	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	2	8	1-3
	3-10	28-35	1.35-1.45	0.2-0.6	0.09-0.12	6.6-7.8	<2	Moderate	0.10			
	10-28	40-55	1.25-1.40	0.06-0.2	0.07-0.11	6.6-7.8	<2	High-----	0.05			
	28-32	---	---	---	---	---	---	---	---			
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
774*:												
Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	---	---			
Cropper-----	0-4	16-20	1.25-1.45	0.6-2.0	0.09-0.11	6.6-7.8	<2	Low-----	0.15	1	8	1-4
	4-16	27-35	1.35-1.55	0.2-0.6	0.05-0.08	6.6-7.8	<2	Moderate	0.05			
	16	---	---	0.0-0.01	---	---	---	---	---			
Rubble land-----	0-60	0	---	>20	0.-0.1	---	<2	Low-----	---	---	8	<.1
780*:												
Bobs-----	0-3	10-20	1.15-1.35	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.15	1	6	1-3
	3-14	10-20	1.25-1.45	0.6-2.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
Orr-----	0-5	12-18	1.35-1.50	0.6-2.0	0.08-0.10	6.1-7.3	<2	Low-----	0.15	5	4	1-3
	5-35	18-25	1.40-1.60	0.2-0.6	0.15-0.17	6.1-7.8	<2	Moderate	0.20			
	35-60	5-22	1.50-1.70	0.6-2.0	0.13-0.15	6.1-7.8	<2	Low-----	0.15			
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
783-----												
Bobs	0-3	10-20	1.15-1.35	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.15	1	6	1-3
	3-14	10-20	1.25-1.45	0.6-2.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
790*:												
Bylo-----	0-4	18-27	1.30-1.50	0.2-0.6	0.19-0.21	7.9-8.4	<4	Moderate	0.55	5	4L	.6-.8
	4-60	18-35	1.30-1.50	0.2-0.6	0.19-0.21	7.9-9.0	4-8	Moderate	0.55			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
793-----												
Bylo	0-4	18-27	1.30-1.50	0.2-0.6	0.19-0.21	7.9-8.4	<4	Moderate	0.55	5	4L	.6-.8
	4-60	18-35	1.30-1.50	0.2-0.6	0.19-0.21	7.9-9.0	4-8	Moderate	0.55			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
800*: Broiland-----	0-3	10-25	1.15-1.35	0.6-2.0	0.10-0.12	7.9-8.4	<2	Low-----	0.15	1	7	1-2
	3-9	27-40	1.35-1.55	0.2-0.6	0.05-0.07	7.9-8.4	<2	Low-----	0.15			
	9-16	20-35	1.40-1.60	0.6-2.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05			
	16-19	10-20	1.45-1.65	2.0-6.0	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
	19-40	---	---	0.0-0.01	---	---	---	---	---			
	40-60	1-5	1.50-1.65	>20	0.03-0.05	7.9-8.4	<2	Low-----	0.02			
Broiland-----	0-3	10-25	1.15-1.35	0.6-2.0	0.10-0.12	7.9-8.4	<2	Low-----	0.15	1	7	1-2
	3-9	27-40	1.35-1.55	0.2-0.6	0.05-0.07	7.9-8.4	<2	Low-----	0.15			
	9-16	20-35	1.40-1.60	0.6-2.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05			
	16-19	10-20	1.45-1.65	2.0-6.0	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
	19-40	---	---	0.0-0.01	---	---	---	---	---			
	40-60	1-5	1.50-1.65	>20	0.03-0.05	7.9-8.4	<2	Low-----	0.02			
801----- Broiland	0-3	10-25	1.15-1.35	0.6-2.0	0.10-0.12	7.9-8.4	<2	Low-----	0.15	1	7	1-2
	3-9	27-40	1.35-1.55	0.2-0.6	0.05-0.07	7.9-8.4	<2	Low-----	0.15			
	9-16	20-35	1.40-1.60	0.6-2.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05			
	16-19	10-20	1.45-1.65	2.0-6.0	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
	19-40	---	---	0.0-0.01	---	---	---	---	---			
	40-60	1-5	1.50-1.65	>20	0.03-0.05	7.9-8.4	<2	Low-----	0.02			
802*: Broiland-----	0-3	10-25	1.15-1.35	0.6-2.0	0.10-0.12	7.9-8.4	<2	Low-----	0.15	1	7	1-2
	3-9	27-40	1.35-1.55	0.2-0.6	0.05-0.07	7.9-8.4	<2	Low-----	0.15			
	9-16	20-35	1.40-1.60	0.6-2.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05			
	16-19	10-20	1.45-1.65	2.0-6.0	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
	19-40	---	---	0.0-0.01	---	---	---	---	---			
	40-60	1-5	1.50-1.65	>20	0.03-0.05	7.9-8.4	<2	Low-----	0.02			
Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	---	---			
803*: Broiland-----	0-3	10-25	1.15-1.35	0.6-2.0	0.10-0.12	7.9-8.4	<2	Low-----	0.15	1	7	1-2
	3-9	27-40	1.35-1.55	0.2-0.6	0.05-0.07	7.9-8.4	<2	Low-----	0.15			
	9-16	20-35	1.40-1.60	0.6-2.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05			
	16-19	10-20	1.45-1.65	2.0-6.0	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
	19-40	---	---	0.0-0.01	---	---	---	---	---			
	40-60	1-5	1.50-1.65	>20	0.03-0.05	7.9-8.4	<2	Low-----	0.02			
Broyles-----	0-12	5-15	1.35-1.55	0.6-2.0	0.13-0.16	7.9-9.0	2-4	Low-----	0.55	5	3	<1
	12-60	5-15	1.40-1.60	2.0-6.0	0.09-0.11	>8.4	4-16	Low-----	0.24			
810*: Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	---	---			
Fax-----	0-3	8-18	1.40-1.60	2.0-6.0	0.04-0.07	7.4-8.4	<2	Low-----	0.10	2	6	2-4
	3-12	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.15			
	12-22	14-28	1.40-1.60	0.2-0.6	0.06-0.09	7.9-8.4	<2	Low-----	0.15			
	22-48	---	---	0.0-0.01	---	---	---	---	---			
822*: Pits.												
Dumps-----	0-60	0-1	---	>6.0	0.01-0.02	---	<2	Low-----	0.00	---	8	<.1

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm		K	T	group	Pct
823*----- Dumps	0-60	0-1	---	>6.0	0.01-0.02	---	<2	Low-----	0.00	---	8	<.1
830*: Genaw-----	0-3	15-25	1.30-1.50	0.6-2.0	0.19-0.21	7.4-8.4	<2	Moderate	0.49	1	6	1-2
	3-10	18-30	1.25-1.45	0.6-2.0	0.14-0.17	7.9-8.4	<4	Low-----	0.24			
	10-16	15-24	1.35-1.55	0.6-2.0	0.09-0.14	7.9-9.0	<4	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
842*: Orr-----	0-5	12-18	1.35-1.50	0.6-2.0	0.08-0.10	6.1-7.3	<2	Low-----	0.15	5	4	1-3
	5-35	18-25	1.40-1.60	0.2-0.6	0.15-0.17	6.1-7.8	<2	Moderate	0.20			
	35-60	5-22	1.50-1.70	0.6-2.0	0.13-0.15	6.1-7.8	<2	Low-----	0.15			
Fax-----	0-3	8-18	1.40-1.60	2.0-6.0	0.04-0.07	7.4-8.4	<2	Low-----	0.10	2	6	2-4
	3-12	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.15			
	12-22	14-28	1.40-1.60	0.2-0.6	0.06-0.09	7.9-8.4	<2	Low-----	0.15			
	22-48	---	---	0.0-0.01	---	---	---	---	---			
850*: Onkeyo-----	0-8	18-27	1.10-1.30	0.6-2.0	0.06-0.13	7.4-8.4	<2	Low-----	0.10	1	6	2-4
	8-15	27-35	1.20-1.40	0.2-0.6	0.04-0.10	7.4-8.4	<2	Low-----	0.05			
	15	---	---	0.0-0.01	---	---	---	---	---			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			
Adobe-----	0-5	18-27	1.25-1.45	0.6-2.0	0.08-0.14	7.9-8.4	<2	Low-----	0.15	1	7	2-4
	5-17	18-27	1.35-1.55	0.6-2.0	0.08-0.14	7.9-8.4	<2	---	---			
	17	---	---	---	---	---	---	---	---			
851*: Grink-----	0-7	12-18	1.20-1.40	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.17	1	7	2-5
	7-19	12-18	1.20-1.40	0.6-2.0	0.05-0.12	7.4-8.4	<2	Low-----	0.17			
	19	---	---	0.0-0.01	---	---	---	---	---			
Onkeyo-----	0-8	18-27	1.10-1.30	0.6-2.0	0.06-0.13	7.4-8.4	<2	Low-----	0.10	1	6	2-4
	8-15	27-35	1.20-1.40	0.2-0.6	0.04-0.10	7.4-8.4	<2	Low-----	0.05			
	15	---	---	0.0-0.01	---	---	---	---	---			
Xine-----	0-7	10-18	1.15-1.30	2.0-6.0	0.08-0.10	7.4-8.4	<2	Low-----	0.10	2	7	2-4
	7-35	10-18	1.15-1.35	2.0-6.0	0.08-0.11	7.9-9.0	<2	Low-----	0.10			
	35-39	---	---	0.0-0.01	---	---	---	---	---			
852*: Grink-----	0-7	12-18	1.20-1.40	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.17	1	7	2-5
	7-19	12-18	1.20-1.40	0.6-2.0	0.05-0.12	7.4-8.4	<2	Low-----	0.17			
	19	---	---	0.0-0.01	---	---	---	---	---			
Onkeyo-----	0-8	18-27	1.10-1.30	0.6-2.0	0.06-0.13	7.4-8.4	<2	Low-----	0.10	1	6	2-4
	8-15	27-35	1.20-1.40	0.2-0.6	0.04-0.10	7.4-8.4	<2	Low-----	0.05			
	15	---	---	0.0-0.01	---	---	---	---	---			
Halacan-----	0-8	10-18	1.25-1.40	2.0-6.0	0.08-0.11	7.9-8.4	<2	Low-----	0.17	1	7	1-2
	8-19	10-18	1.10-1.30	2.0-6.0	0.04-0.09	7.9-9.0	<2	Low-----	0.05			
	19-23	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
870*:												
Amelar-----	0-7	18-27	1.05-1.25	0.6-2.0	0.13-0.17	7.4-8.4	<2	Moderate	0.24	5	6	2-4
	7-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
Eoj-----	0-8	20-27	1.30-1.50	0.6-2.0	0.09-0.11	7.4-7.8	<2	Low-----	0.10	1	8	1-3
	8-60	40-60	1.25-1.45	<0.06	0.10-0.12	7.4-8.4	<2	High-----	0.15			
Amelar-----	0-6	18-27	1.05-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	5	7	2-4
	6-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
871*:												
Amelar-----	0-6	18-27	1.05-1.25	0.6-2.0	0.13-0.17	7.4-8.4	<2	Moderate	0.24	5	6	2-4
	6-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
874*:												
Amelar-----	0-6	18-27	1.05-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	5	7	2-4
	6-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
875*:												
Amelar-----	0-6	18-27	1.05-1.25	0.6-2.0	0.13-0.17	7.4-8.4	<2	Moderate	0.24	5	6	2-4
	6-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
Eoj-----	0-8	20-27	1.30-1.50	0.6-2.0	0.09-0.11	7.4-7.8	<2	Low-----	0.10	1	8	1-3
	8-60	40-60	1.25-1.45	<0.06	0.10-0.12	7.4-8.4	<2	High-----	0.15			
Hardol-----	0-12	18-27	1.10-1.30	0.6-2.0	0.07-0.13	7.4-8.4	<2	Low-----	0.28	5	6	2-3
	12-33	20-27	1.10-1.30	0.6-2.0	0.03-0.08	7.4-8.4	<2	Low-----	0.10			
	33-60	20-27	1.10-1.30	0.6-2.0	0.03-0.07	7.9-8.4	<2	Low-----	0.10			
876*:												
Amelar-----	0-6	18-27	1.05-1.25	0.6-2.0	0.13-0.17	7.4-8.4	<2	Moderate	0.24	5	6	2-4
	6-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
Xine-----	0-7	10-18	1.15-1.30	2.0-6.0	0.08-0.10	7.4-8.4	<2	Low-----	0.10	2	7	2-4
	7-35	10-18	1.15-1.35	2.0-6.0	0.08-0.11	7.9-9.0	<2	Low-----	0.10			
	35-39	---	---	0.0-0.01	---	---	---	---	---			
Halacan-----	0-8	10-18	1.25-1.40	2.0-6.0	0.08-0.11	7.9-8.4	<2	Low-----	0.17	1	7	1-2
	8-19	10-18	1.10-1.30	2.0-6.0	0.04-0.09	7.9-9.0	<2	Low-----	0.05			
	19-23	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
880*:												
Wredah-----	0-5	15-20	1.35-1.50	0.2-0.6	0.09-0.12	7.9-8.4	<2	Low-----	0.17	5	4	1-3
	5-17	25-35	1.30-1.50	0.2-0.6	0.10-0.13	7.9-9.0	<2	Moderate	0.15			
	17-34	5-15	1.40-1.60	2.0-6.0	0.07-0.10	7.9-9.0	<2	Low-----	0.10			
	34-60	5-15	1.40-1.60	0.6-2.0	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
Amelar-----	0-6	18-27	1.05-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	5	7	2-4
	6-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
Orr-----	0-5	12-18	1.35-1.50	0.6-2.0	0.08-0.10	6.1-7.3	<2	Low-----	0.15	5	4	1-3
	5-35	18-25	1.40-1.60	0.2-0.6	0.15-0.17	6.1-7.8	<2	Moderate	0.20			
	35-60	5-22	1.50-1.70	0.6-2.0	0.13-0.15	6.1-7.8	<2	Low-----	0.15			
900*:												
Abgese-----	0-4	5-15	1.40-1.50	2.0-6.0	0.10-0.12	7.9-8.4	<2	Low-----	0.17	5	3	.7-1
	4-22	18-30	1.35-1.45	0.6-2.0	0.12-0.15	7.9-8.4	<2	Moderate	0.15			
	22-43	5-10	1.50-1.60	2.0-6.0	0.09-0.11	7.9-8.4	<2	Low-----	0.10			
	43-60	0-5	1.55-1.65	6.0-20	0.06-0.09	8.5-9.0	2-4	Low-----	0.05			
Roden-----	0-2	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	2-11	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	11	---	---	0.0-0.01	---	---	---	---	---			
Orr-----	0-5	12-18	1.35-1.50	0.6-2.0	0.08-0.10	6.1-7.3	<2	Low-----	0.15	5	4	1-3
	5-35	18-25	1.40-1.60	0.2-0.6	0.15-0.17	6.1-7.8	<2	Moderate	0.20			
	35-60	5-22	1.50-1.70	0.6-2.0	0.13-0.15	6.1-7.8	<2	Low-----	0.15			
902*:												
Abgese-----	0-4	5-15	1.40-1.50	2.0-6.0	0.10-0.12	7.9-8.4	<2	Low-----	0.17	5	3	.7-1
	4-22	18-30	1.35-1.45	0.6-2.0	0.12-0.15	7.9-8.4	<2	Moderate	0.15			
	22-43	5-10	1.50-1.60	2.0-6.0	0.09-0.11	7.9-8.4	<2	Low-----	0.10			
	43-60	0-5	1.55-1.65	6.0-20	0.06-0.09	8.5-9.0	2-4	Low-----	0.05			
Risley-----	0-3	27-35	1.15-1.20	0.06-0.2	0.16-0.18	7.4-8.4	<2	Moderate	0.32	2	6	2-3
	3-29	35-55	1.25-1.40	0.06-0.2	0.15-0.17	7.4-8.4	<2	High-----	0.32			
	29	---	---	0.0-0.01	---	---	---	---	---			
Roden-----	0-1	30-40	1.30-1.50	0.2-0.6	0.07-0.13	7.9-8.4	<2	Moderate	0.15	1	6	1-2
	1-8	35-50	1.30-1.50	0.06-0.2	0.06-0.11	7.9-8.4	<2	Moderate	0.15			
	8-12	---	---	0.0-0.01	---	---	---	---	---			
911*:												
Devilsgait-----	0-10	12-20	1.20-1.35	0.6-2.0	0.19-0.21	7.9-9.0	<4	Low-----	0.37	5	4L	2-4
	10-60	20-35	1.25-1.35	0.2-0.6	0.19-0.21	7.9-9.0	<4	Moderate	0.32			
Duffer-----	0-6	20-27	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	>8	Moderate	0.49	5	4L	<1
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>8	Moderate	0.49			
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
913-----												
Devilsgait	0-10	12-20	1.20-1.35	0.6-2.0	0.19-0.21	7.9-9.0	<4	Low-----	0.37	5	4L	2-4
	10-60	20-35	1.25-1.35	0.2-0.6	0.19-0.21	7.9-9.0	<4	Moderate	0.32			
920*:												
Abgese-----	0-4	5-15	1.40-1.50	2.0-6.0	0.10-0.12	7.9-8.4	<2	Low-----	0.17	5	3	.7-1
	4-22	18-30	1.35-1.45	0.6-2.0	0.12-0.15	7.9-8.4	<2	Moderate	0.15			
	22-43	5-10	1.50-1.60	2.0-6.0	0.09-0.11	7.9-8.4	<2	Low-----	0.10			
	43-60	0-5	1.55-1.65	6.0-20	0.06-0.09	8.5-9.0	2-4	Low-----	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
920*: Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	-----	---			
Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	-----	---			
930----- Tosser	0-8	12-18	1.30-1.50	0.6-2.0	0.14-0.18	7.9-8.4	<2	Low-----	0.28	5	4L	1-2
	8-16	12-18	1.40-1.60	0.6-2.0	0.06-0.12	7.9-9.0	<2	Low-----	0.10			
	16-24	2-8	1.50-1.70	6.0-20	0.03-0.05	>8.4	<4	Low-----	0.02			
	24-60	2-8	1.50-1.70	2.0-6.0	0.03-0.05	>8.4	<4	Low-----	0.02			
940*: Nyak-----	0-9	10-18	1.30-1.50	2.0-6.0	0.13-0.15	7.9-8.4	<2	Low-----	0.32	5	3	1-2
	9-14	10-18	1.40-1.60	2.0-6.0	0.13-0.15	7.9-8.4	<2	Low-----	0.32			
	14-60	10-18	1.45-1.65	0.2-0.6	0.15-0.18	7.9-9.0	<2	Moderate	0.28			
Heist-----	0-8	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	8-40	8-18	1.40-1.60	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	40-60	2-8	1.45-1.65	2.0-6.0	0.06-0.08	7.9-9.0	2-4	Low-----	0.20			
951*: Nyak-----	0-9	27-35	1.25-1.45	0.6-0.6	0.19-0.21	7.9-8.4	<2	Moderate	0.28	5	4L	1-2
	9-14	10-18	1.40-1.60	2.0-6.0	0.13-0.15	7.9-8.4	<2	Low-----	0.32			
	14-60	10-18	1.45-1.65	0.2-0.6	0.15-0.18	7.9-9.0	<2	Moderate	0.28			
Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
Pern-----	0-14	18-25	1.30-1.50	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.37	5	4L	1-2
	14-20	18-25	1.40-1.60	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.43			
	20-60	18-25	1.40-1.60	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.43			
960*: Doten-----	0-5	40-60	1.20-1.40	<0.06	0.14-0.16	>7.8	2-4	High-----	0.24	5	4	1-2
	5-80	40-60	1.20-1.40	<0.06	0.14-0.16	>7.8	<16	High-----	0.24			
Bylo-----	0-4	18-27	1.30-1.50	0.2-0.6	0.19-0.21	7.9-8.4	<4	Moderate	0.55	5	4L	.6-.8
	4-60	18-35	1.30-1.50	0.2-0.6	0.19-0.21	7.9-9.0	4-8	Moderate	0.55			
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
970*: Doten-----	0-5	40-60	1.20-1.40	<0.06	0.14-0.16	>7.8	2-4	High-----	0.24	5	4	1-2
	5-80	40-60	1.20-1.40	<0.06	0.14-0.16	>7.8	<16	High-----	0.24			
Doten-----	0-5	40-60	1.20-1.40	<0.06	0.14-0.16	>7.8	2-4	High-----	0.24	5	4	1-2
	5-80	40-60	1.20-1.40	<0.06	0.14-0.16	>7.8	<16	High-----	0.24			
981*: Breko-----	0-5	5-18	1.40-1.55	2.0-6.0	0.10-0.12	7.9-9.0	<2	Low-----	0.24	5	4	1-2
	5-9	25-35	1.40-1.60	0.2-0.6	0.12-0.15	7.9-9.0	<2	Moderate	0.15			
	9-26	25-35	1.40-1.60	0.2-0.6	0.05-0.08	7.9-9.0	<2	Moderate	0.15			
	26-60	5-15	1.50-1.70	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		Pct
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					
981*:												
Armespan-----	0-1	10-18	1.40-1.55	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10	5	5	.8-2
	1-4	10-18	1.40-1.55	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.20			
	4-10	12-18	1.35-1.50	0.6-2.0	0.09-0.12	7.9-9.0	8-16	Low-----	0.24			
	10-36	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	8-16	Low-----	0.10			
	36-60	5-10	1.45-1.60	6.0-20	0.02-0.05	7.9-9.0	2-4	Low-----	0.05			
982*:												
Breko-----	0-5	5-18	1.40-1.55	2.0-6.0	0.10-0.12	7.9-9.0	<2	Low-----	0.24	5	4	1-2
	5-9	25-35	1.40-1.60	0.2-0.6	0.12-0.15	7.9-9.0	<2	Moderate	0.15			
	9-26	25-35	1.40-1.60	0.2-0.6	0.05-0.08	7.9-9.0	<2	Moderate	0.15			
	26-60	5-15	1.50-1.70	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	---	---			
990*:												
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
Pern-----	0-14	18-25	1.30-1.50	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.37	5	4L	1-2
	14-20	18-25	1.40-1.60	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.43			
	20-60	18-25	1.40-1.60	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.43			
991*:												
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Zerk-----	0-3	12-17	1.30-1.50	2.0-6.0	0.13-0.15	7.9-9.0	<2	Low-----	0.20	2	5	<1
	3-12	12-17	1.35-1.55	2.0-6.0	0.11-0.13	7.9-9.0	<2	Low-----	0.17			
	12-60	0-10	1.50-1.65	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
992*:												
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
Linoyer-----	0-4	12-18	1.30-1.50	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	5	3	.5-1
	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
1000*:												
Linoyer-----	0-4	12-18	1.30-1.50	0.6-2.0	0.19-0.21	7.9-9.0	<2	Low-----	0.49	5	4L	.5-1
	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
Unsel-----	0-4	15-20	1.35-1.55	2.0-6.0	0.10-0.13	7.9-9.0	<2	Low-----	0.20	3	4	<.5
	4-14	27-35	1.25-1.45	0.2-0.6	0.10-0.17	7.4-9.0	<2	Moderate	0.20			
	14-22	10-25	1.35-1.55	0.6-2.0	0.07-0.12	8.5-9.0	4-8	Low-----	0.20			
	22-60	2-8	1.50-1.70	6.0-20.0	0.03-0.05	8.5-9.0	4-8	Low-----	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1010*: Hunnton-----	0-4	10-25	1.20-1.25	0.6-2.0	0.14-0.18	7.4-8.4	<4	Low-----	0.49	2	5	1-2
	4-10	20-30	1.50-1.55	0.2-0.6	0.15-0.21	7.9-8.4	<4	Moderate	0.49			
	10-35	45-55	1.20-1.25	0.06-0.2	0.10-0.16	7.4-8.4	<4	High-----	0.28			
	35-40	---	---	0.0-0.01	---	---	---	---	---			
Chiara-----	0-4	10-18	1.25-1.40	0.6-2.0	0.19-0.21	6.6-8.4	<2	Low-----	0.55	1	5	1-2
	4-19	10-18	1.35-1.55	0.6-2.0	0.16-0.19	6.6-9.0	2-4	Low-----	0.49			
	19-23	---	---	0.0-0.01	---	---	---	---	---			
1012*: Hunnton-----	0-4	10-25	1.20-1.25	0.6-2.0	0.14-0.18	7.4-8.4	<4	Low-----	0.49	2	5	1-2
	4-10	20-30	1.50-1.55	0.2-0.6	0.15-0.21	7.9-8.4	<4	Moderate	0.49			
	10-35	45-55	1.20-1.25	0.06-0.2	0.10-0.16	7.4-8.4	<4	High-----	0.28			
	35-40	---	---	0.0-0.01	---	---	---	---	---			
Wieland-----	0-8	8-18	1.20-1.40	0.6-2.0	0.16-0.20	7.4-8.4	<2	Low-----	0.55	5	5	1-2
	8-17	40-55	1.25-1.40	0.06-0.2	0.09-0.13	7.4-9.0	<4	High-----	0.28			
	17-30	27-35	1.45-1.60	0.06-0.2	0.10-0.17	7.9-9.0	<8	Moderate	0.43			
	30-60	10-20	1.45-1.65	0.6-2.0	0.09-0.16	7.9-9.0	<8	Low-----	0.49			
Kelk-----	0-4	15-20	1.15-1.30	0.6-2.0	0.15-0.17	6.6-8.4	<4	Low-----	0.49	5	3	1-2
	4-32	18-27	1.40-1.60	0.06-0.2	0.19-0.21	7.4-8.4	<8	Moderate	0.49			
	32-60	18-27	1.40-1.60	0.6-2.0	0.18-0.20	8.5-9.0	4-16	Moderate	0.49			
1020*: Sonoma-----	0-10	20-27	1.35-1.50	0.6-2.0	0.18-0.21	7.9-9.0	<4	Moderate	0.43	5	4L	.6-2
	10-60	25-35	1.35-1.50	0.2-0.6	0.19-0.21	7.9-9.0	<4	Moderate	0.37			
Kelk-----	0-4	15-20	1.15-1.30	0.6-2.0	0.15-0.17	6.6-8.4	<4	Low-----	0.49	5	3	1-2
	4-32	18-27	1.40-1.60	0.06-0.2	0.19-0.21	7.4-8.4	<8	Moderate	0.49			
	32-60	18-27	1.40-1.60	0.6-2.0	0.18-0.20	8.5-9.0	4-16	Moderate	0.49			
1030----- Chiara	0-4	10-18	1.25-1.40	0.6-2.0	0.19-0.21	6.6-8.4	<2	Low-----	0.55	1	5	1-2
	4-19	10-18	1.35-1.55	0.6-2.0	0.16-0.19	6.6-9.0	2-4	Low-----	0.49			
	19-23	---	---	0.0-0.01	---	---	---	---	---			
1032*: Chiara-----	0-4	10-18	1.25-1.40	0.6-2.0	0.19-0.21	6.6-8.4	<2	Low-----	0.55	1	5	1-2
	4-19	10-18	1.35-1.55	0.6-2.0	0.16-0.19	6.6-9.0	2-4	Low-----	0.49			
	19-23	---	---	0.0-0.01	---	---	---	---	---			
Kelk-----	0-4	15-20	1.15-1.30	0.6-2.0	0.15-0.17	6.6-8.4	<4	Low-----	0.49	5	3	1-2
	4-32	18-27	1.40-1.60	0.06-0.2	0.19-0.21	7.4-8.4	<8	Moderate	0.49			
	32-60	18-27	1.40-1.60	0.6-2.0	0.18-0.20	8.5-9.0	4-16	Moderate	0.49			
Kelk-----	0-4	15-20	1.15-1.30	0.6-2.0	0.15-0.17	6.6-8.4	<4	Low-----	0.49	5	3	1-2
	4-32	18-27	1.40-1.60	0.06-0.2	0.19-0.21	7.4-8.4	<8	Moderate	0.49			
	32-60	18-27	1.40-1.60	0.6-2.0	0.18-0.20	8.5-9.0	4-16	Moderate	0.49			
1050*: Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	---	---			
Dewar-----	0-3	18-25	1.15-1.25	0.6-2.0	0.13-0.17	6.6-8.4	<2	Moderate	0.37	1	7	1-2
	3-12	27-35	1.20-1.35	0.2-0.6	0.12-0.16	6.6-8.4	<4	Moderate	0.37			
	12-18	15-27	1.15-1.35	0.6-2.0	0.12-0.16	7.9-8.4	<8	Low-----	0.43			
	18-60	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1081*:												
Bobs-----	0-3	10-20	1.15-1.35	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.15	1	6	1-3
	3-14	10-20	1.25-1.45	0.6-2.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
Fax-----	0-3	8-18	1.40-1.60	2.0-6.0	0.04-0.07	7.4-8.4	<2	Low-----	0.10	2	6	2-4
	3-12	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.15			
	12-22	14-28	1.40-1.60	0.2-0.6	0.06-0.09	7.9-8.4	<2	Low-----	0.15			
	22-48	---	---	0.0-0.01	---	---	---	-----	---			
Parisa-----	0-4	8-18	1.50-1.65	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.20	2	5	1-2
	4-26	8-18	1.50-1.70	0.6-2.0	0.04-0.12	7.9-9.0	<2	Low-----	0.10			
	26-47	---	---	0.0-0.01	---	---	<2	-----	---			
	47-60	0-8	1.60-1.75	6.0-20	0.03-0.11	7.9-9.0	<2	Low-----	0.02			
1090*:												
Fax-----	0-3	8-18	1.40-1.60	2.0-6.0	0.04-0.07	7.4-8.4	<2	Low-----	0.10	2	6	2-4
	3-12	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.15			
	12-22	14-28	1.40-1.60	0.2-0.6	0.06-0.09	7.9-8.4	<2	Low-----	0.15			
	22-48	---	---	0.0-0.01	---	---	---	-----	---			
Hunnton-----	0-4	10-25	1.20-1.25	0.6-2.0	0.14-0.18	7.4-8.4	<4	Low-----	0.49	2	5	1-2
	4-10	20-30	1.50-1.55	0.2-0.6	0.15-0.21	7.9-8.4	<4	Moderate	0.49			
	10-35	45-55	1.20-1.25	0.06-0.2	0.10-0.16	7.4-8.4	<4	High-----	0.28			
	35-40	---	---	0.0-0.01	---	---	---	-----	---			
Cassiro-----	0-5	10-20	1.30-1.50	0.6-2.0	0.10-0.12	6.1-7.3	<2	Low-----	0.17	5	6	1-2
	5-60	40-50	1.30-1.50	0.2-0.6	0.05-0.06	6.1-7.3	<2	Moderate	0.10			
1120*:												
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
Sycomat-----	0-4	5-18	1.40-1.60	2.0-6.0	0.11-0.13	7.9-8.4	<4	Low-----	0.24	5	3	<.5
	4-15	5-18	1.45-1.65	2.0-6.0	0.11-0.13	>8.4	<4	Low-----	0.24			
	15-44	5-18	1.45-1.65	0.6-2.0	0.11-0.13	>8.4	8-16	Low-----	0.24			
	44-60	2-5	1.50-1.70	2.0-6.0	0.08-0.10	>8.4	8-16	Low-----	0.20			
1122*:												
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
Pern-----	0-14	18-25	1.30-1.50	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.37	5	4L	1-2
	14-20	18-25	1.40-1.60	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.43			
	20-60	18-25	1.40-1.60	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.43			
1130*:												
Duffer-----	0-6	15-20	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Low-----	0.37	5	4L	1-3
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>16	Moderate	0.43			
Duffer-----	0-6	20-27	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Moderate	0.49	5	4L	<1
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>8	Moderate	0.49			
Equis-----	0-6	40-50	1.25-1.45	<0.06	0.09-0.11	8.5-9.0	8-16	High-----	0.28	5	4	1-2
	6-30	40-50	1.25-1.45	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
	30-50	30-45	1.35-1.55	<0.06	0.14-0.17	8.5-9.0	4-8	High-----	0.24			
	50-60	20-45	1.45-1.65	0.06-0.2	0.15-0.21	8.5-9.0	<4	High-----	0.32			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1131*: Duffer-----	0-6	15-20	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Low-----	0.37	5	4L	1-3
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>16	Moderate	0.43			
Devilsgait-----	0-10	15-25	1.20-1.30	0.6-2.0	0.19-0.21	7.9-8.4	<2	Moderate	0.37	5	8	2-4
	10-60	20-35	1.25-1.35	0.2-0.6	0.19-0.21	7.9-8.4	<2	Moderate	0.32			
Duffer-----	0-6	20-27	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Moderate	0.49	5	4L	<1
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>8	Moderate	0.49			
1132-----	0-6	20-27	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	8-16	Moderate	0.49	5	4L	<1
Duffer	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>8	Moderate	0.49			
1141*: Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	---	---			
Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
1151*: Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-12	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	12	---	---	0.0-0.01	---	---	---	---	---			
Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-12	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	12	---	---	0.0-0.01	---	---	---	---	---			
Rock outcrop.												
1152*: Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-12	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	12	---	---	0.0-0.01	---	---	---	---	---			
Zimbob-----	0-1	10-18	1.15-1.35	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10	1	6	1-2
	1-7	10-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-9.0	<2	Low-----	0.10			
	7	---	---	0.0-0.01	---	---	---	---	---			
Eaglepass-----	0-1	8-18	1.20-1.40	2.0-6.0	0.06-0.10	7.9-9.0	<2	Low-----	0.15	1	8	<.5
	1-4	8-18	1.20-1.40	2.0-6.0	0.03-0.05	7.9-9.0	<2	Low-----	0.15			
	4	---	---	0.0-0.01	---	---	---	---	---			
1171*: Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
Hardol-----	0-12	18-27	1.10-1.30	0.6-2.0	0.07-0.13	7.4-8.4	<2	Low-----	0.28	5	6	2-3
	12-33	20-27	1.10-1.30	0.6-2.0	0.03-0.08	7.4-8.4	<2	Low-----	0.10			
	33-60	20-27	1.10-1.30	0.6-2.0	0.03-0.07	7.9-8.4	<2	Low-----	0.10			
Halacan-----	0-8	10-18	1.25-1.40	2.0-6.0	0.08-0.11	7.9-8.4	<2	Low-----	0.17	1	7	1-2
	8-19	10-18	1.10-1.30	2.0-6.0	0.04-0.09	7.9-9.0	<2	Low-----	0.05			
	19-23	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		Pct
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					
1173*:												
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
Hardol-----	0-12	18-27	1.10-1.30	0.6-2.0	0.07-0.13	7.4-8.4	<2	Low-----	0.28	5	6	2-3
	12-33	20-27	1.10-1.30	0.6-2.0	0.03-0.08	7.4-8.4	<2	Low-----	0.10			
	33-60	20-27	1.10-1.30	0.6-2.0	0.03-0.07	7.9-8.4	<2	Low-----	0.10			
Rock outcrop.												
1174*:												
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
Wardbay-----	0-18	18-27	1.05-1.20	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.10	3	6	2-4
	18-45	18-27	1.10-1.30	0.6-2.0	0.03-0.08	7.9-8.4	<2	Low-----	0.05			
	45	---	---	0.0-0.01	---	---	---	-----	---			
Hardzem-----	0-1	10-20	1.40-1.60	0.6-2.0	0.10-0.15	7.4-7.8	<2	Low-----	0.20	2	6	1-2
	1-21	20-30	1.40-1.60	0.06-0.2	0.05-0.11	6.6-7.8	<2	Low-----	0.05			
	21-52	---	---	0.0-20.0	---	---	---	-----	---			
	52	---	---	0.0-0.01	---	---	---	-----	---			
1175*:												
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
Hardol-----	0-12	18-27	1.10-1.30	0.6-2.0	0.07-0.13	7.4-8.4	<2	Low-----	0.28	5	6	2-3
	12-33	20-27	1.10-1.30	0.6-2.0	0.03-0.08	7.4-8.4	<2	Low-----	0.10			
	33-60	20-27	1.10-1.30	0.6-2.0	0.03-0.07	7.9-8.4	<2	Low-----	0.10			
Hardzem-----	0-1	10-20	1.40-1.60	0.6-2.0	0.10-0.15	7.4-7.8	<2	Low-----	0.20	2	6	1-2
	1-21	20-30	1.40-1.60	0.06-0.2	0.05-0.11	6.6-7.8	<2	Low-----	0.05			
	21-52	---	---	0.0-20.0	---	---	---	-----	---			
	52	---	---	0.0-0.01	---	---	---	-----	---			
1176*:												
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
Hardzem-----	0-1	10-20	1.40-1.60	0.6-2.0	0.10-0.15	7.4-7.8	<2	Low-----	0.20	2	6	1-2
	1-21	20-30	1.40-1.60	0.06-0.2	0.05-0.11	6.6-7.8	<2	Low-----	0.05			
	21-52	---	---	0.0-20.0	---	---	---	-----	---			
	52	---	---	0.0-0.01	---	---	---	-----	---			
Rock outcrop.												
1178*:												
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
Hardol-----	0-12	18-27	1.10-1.30	0.6-2.0	0.07-0.13	7.4-8.4	<2	Low-----	0.28	5	6	2-3
	12-33	20-27	1.10-1.30	0.6-2.0	0.03-0.08	7.4-8.4	<2	Low-----	0.10			
	33-60	20-27	1.10-1.30	0.6-2.0	0.03-0.07	7.9-8.4	<2	Low-----	0.10			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1178*: Xine-----	0-10	10-18	1.15-1.30	2.0-6.0	0.08-0.10	7.4-8.4	<2	Low-----	0.10	2	7	2-4
	10-35	10-18	1.15-1.35	2.0-6.0	0.08-0.11	7.9-9.0	<2	Low-----	0.10			
	35-39	---	---	0.0-0.01	---	---	---	---	---			
1180*: Eoj-----	0-8	20-27	1.30-1.50	0.6-2.0	0.09-0.11	7.4-7.8	<2	Low-----	0.10	1	8	1-3
	8-60	40-60	1.25-1.45	<0.06	0.10-0.12	7.4-8.4	<2	High-----	0.15			
Eoj-----	0-8	20-27	1.30-1.50	0.6-2.0	0.09-0.11	7.4-7.8	<2	Low-----	0.10	1	8	1-3
	8-60	40-60	1.25-1.45	<0.06	0.10-0.12	7.4-8.4	<2	High-----	0.15			
McIvey-----	0-5	20-27	1.05-1.20	0.6-2.0	0.12-0.15	6.6-7.3	<2	Moderate	0.15	5	7	2-5
	5-12	20-27	1.15-1.35	0.6-2.0	0.10-0.12	6.6-7.3	<2	Moderate	0.15			
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Moderate	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
1190*: Katelana-----	0-2	14-24	1.30-1.45	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.37	5	4L	1-2
	2-19	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	4-8	Moderate	0.49			
	19-32	18-25	1.40-1.55	0.6-2.0	0.19-0.21	8.5-9.0	>16	Moderate	0.49			
	32-62	27-40	1.40-1.55	0.2-0.6	0.19-0.21	8.5-9.0	>16	High-----	0.32			
	62-75	40-50	1.50-1.70	0.06-0.2	0.14-0.17	7.9-8.4	>16	High-----	0.24			
Boofuss-----	0-5	40-50	1.30-1.50	0.06-0.2	0.15-0.17	>8.4	>16	High-----	0.32	5	4	<1
	5-20	35-50	1.35-1.55	0.06-0.2	0.16-0.18	>8.4	>16	High-----	0.37			
	20-60	8-15	1.45-1.65	2.0-6.0	0.14-0.17	8.5-9.0	<2	Low-----	0.32			
1201*: Biken-----	0-5	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	5-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	---	---			
	30-34	---	---	0.0-0.01	---	---	---	---	---			
Orr-----	0-5	12-18	1.35-1.50	0.6-2.0	0.08-0.10	6.1-7.3	<2	Low-----	0.15	5	4	1-3
	5-35	18-25	1.40-1.60	0.2-0.6	0.15-0.17	6.1-7.8	<2	Moderate	0.20			
	35-60	5-22	1.50-1.70	0.6-2.0	0.13-0.15	6.1-7.8	<2	Low-----	0.15			
1202*: Biken-----	0-5	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	5-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	---	---			
	30-34	---	---	0.0-0.01	---	---	---	---	---			
Biken-----	0-9	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	9-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	---	---			
	30	---	---	0.0-0.01	---	---	---	---	---			
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
1221*: Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.09-0.13	7.9-9.0	<2	Low-----	0.17	2	7	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1221*:												
Grink-----	0-7	12-18	1.20-1.40	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.17	1	7	2-5
	7-19	12-18	1.20-1.40	0.6-2.0	0.05-0.12	7.4-8.4	<2	Low-----	0.17			
	19	---	---	0.0-0.01	---	---	---	-----	---			
Onkeyo-----	0-8	18-27	1.10-1.30	0.6-2.0	0.06-0.13	7.4-8.4	<2	Low-----	0.10	1	6	2-4
	8-15	27-35	1.20-1.40	0.2-0.6	0.04-0.10	7.4-8.4	<2	Low-----	0.05			
	15	---	---	0.0-0.01	---	---	---	-----	---			
1222*:												
Grink-----	0-7	12-18	1.20-1.40	0.6-2.0	0.10-0.15	7.4-8.4	<2	Low-----	0.20	1	6	2-5
	7-19	12-18	1.20-1.40	0.6-2.0	0.05-0.12	7.4-8.4	<2	Low-----	0.17			
	19	---	---	0.0-0.01	---	---	---	-----	---			
Amelar-----	0-6	18-27	1.05-1.25	0.6-2.0	0.13-0.17	7.4-8.4	<2	Moderate	0.24	5	6	2-4
	6-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
Xine-----	0-7	10-18	1.15-1.30	2.0-6.0	0.08-0.10	7.4-8.4	<2	Low-----	0.10	2	7	2-4
	7-35	10-18	1.15-1.35	2.0-6.0	0.08-0.11	7.9-9.0	<2	Low-----	0.10			
	35-39	---	---	0.0-0.01	---	---	---	-----	---			
1230*:												
Garfan-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.4-7.8	<2	Low-----	0.20	1	7	1-2
	8-27	35-45	1.25-1.45	<0.06	0.03-0.06	6.6-8.4	<2	Moderate	0.02			
	27-60	35-45	1.25-1.45	<0.06	0.03-0.06	6.6-8.4	<2	Moderate	0.02			
McIvey-----	0-5	20-27	1.05-1.20	0.6-2.0	0.12-0.15	6.6-7.3	<2	Moderate	0.15	5	7	2-5
	5-12	20-27	1.15-1.35	0.6-2.0	0.10-0.12	6.6-7.3	<2	Moderate	0.15			
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Moderate	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Hutchley-----	0-3	12-25	1.15-1.25	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	1	7	2-3
	3-12	28-35	1.40-1.50	0.2-0.6	0.09-0.11	6.6-7.8	<2	Moderate	0.10			
	12-16	---	---	---	---	---	---	-----	---			
1240*:												
Biken-----	0-9	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	9-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	-----	---			
	30	---	---	0.0-0.01	---	---	---	-----	---			
Biken-----	0-9	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	9-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	-----	---			
	30	---	---	0.0-0.01	---	---	---	-----	---			
Biken-----	0-3	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	3-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	19-30	---	---	0.0-20.0	---	---	---	-----	---			
	30-34	---	---	0.0-0.01	---	---	---	-----	---			
1242*:												
Biken-----	0-9	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	9-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	-----	---			
	30	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1242*:												
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Barfan-----	0-2	5-15	0.80-0.95	0.6-2.0	0.21-0.42	7.9-9.0	<2	Low-----	0.20	1	4	.8-2
	2-11	5-15	0.80-0.95	0.6-2.0	0.25-0.50	7.9-9.0	<2	Low-----	0.20			
	11	---	---	0.0-0.01	---	---	---	---	---			
1243*:												
Biken-----	0-9	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	9-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	---	---			
	30	---	---	0.0-0.01	---	---	---	---	---			
Breko-----	0-5	5-18	1.40-1.55	2.0-6.0	0.10-0.12	7.9-9.0	<2	Low-----	0.24	5	4	1-2
	5-9	25-35	1.40-1.60	0.2-0.6	0.12-0.15	7.9-9.0	<2	Moderate	0.15			
	9-26	25-35	1.40-1.60	0.2-0.6	0.05-0.08	7.9-9.0	<2	Moderate	0.15			
	26-60	5-15	1.50-1.70	6.0-20	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
1245*:												
Biken-----	0-9	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	9-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	---	---			
	30	---	---	0.0-0.01	---	---	---	---	---			
Biken-----	0-3	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	3-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	---	---			
	30-34	---	---	0.0-0.01	---	---	---	---	---			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
1251*:												
Alley-----	0-4	5-10	1.35-1.45	2.0-6.0	0.10-0.12	7.4-8.4	<2	Low-----	0.17	5	4	1-2
	4-16	20-30	1.40-1.50	0.2-0.6	0.14-0.17	6.6-8.4	<2	Moderate	0.20			
	16-50	10-20	1.45-1.55	0.2-0.6	0.11-0.13	7.9-9.0	2-8	Low-----	0.20			
	50-60	5-10	1.45-1.55	2.0-6.0	0.07-0.09	7.9-9.0	2-8	Low-----	0.05			
Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	---	---			
Cowgil-----	0-4	10-20	1.30-1.50	2.0-6.0	0.05-0.08	7.4-8.4	<2	Low-----	0.10	5	5	1-2
	4-21	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.05			
	21-61	2-10	1.50-1.65	>20	0.03-0.04	7.9-9.0	<2	Low-----	0.02			
1260*:												
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Urmafot-----	0-9	18-27	1.25-1.45	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20	1	6	2-4
	9-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1270*:												
Boofuss-----	0-5	40-50	1.30-1.50	0.06-0.2	0.15-0.17	>8.4	>16	High-----	0.32	5	4	<1
	5-20	35-50	1.35-1.55	0.06-0.2	0.16-0.18	>8.4	>16	High-----	0.37			
	20-60	8-15	1.45-1.65	2.0-6.0	0.14-0.17	8.5-9.0	<2	Low-----	0.32			
Boofuss-----	0-5	40-50	1.30-1.50	0.06-0.2	0.15-0.17	>8.4	>16	High-----	0.32	5	4	<1
	5-20	35-50	1.35-1.55	0.06-0.2	0.16-0.18	>8.4	>16	High-----	0.37			
	20-60	8-15	1.45-1.65	2.0-6.0	0.14-0.17	8.5-9.0	<2	Low-----	0.32			
Equis-----	0-6	40-50	1.25-1.45	<0.06	0.09-0.11	8.5-9.0	8-16	High-----	0.28	5	4	1-2
	6-30	40-50	1.25-1.45	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
	30-50	30-45	1.35-1.55	<0.06	0.14-0.17	8.5-9.0	4-8	High-----	0.24			
	50-60	20-45	1.45-1.65	0.06-0.2	0.15-0.21	8.5-9.0	<4	High-----	0.32			
1280*:												
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Molion-----	0-2	8-15	1.35-1.55	2.0-6.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05	1	5	1-2
	2-14	8-18	1.30-1.40	0.6-2.0	0.05-0.07	7.9-9.0	<2	Low-----	0.05			
	14-25	---	---	0.0-0.01	---	---	---	---	---			
Broland-----	0-3	10-25	1.15-1.35	0.6-2.0	0.10-0.12	7.9-8.4	<2	Low-----	0.15	1	7	1-2
	3-9	27-40	1.35-1.55	0.2-0.6	0.05-0.07	7.9-8.4	<2	Low-----	0.15			
	9-16	20-35	1.40-1.60	0.6-2.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05			
	16-19	10-20	1.45-1.65	2.0-6.0	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
	19-40	---	---	0.0-0.01	---	---	---	---	---			
	40-60	1-5	1.50-1.65	>20	0.03-0.05	7.9-8.4	<2	Low-----	0.02			
1282*:												
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.9-8.4	<2	Low-----	0.10	1	7	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20	1	6	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
1283*:												
Urmafot-----	0-8	18-27	1.25-1.45	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20	1	6	2-4
	8-14	18-27	1.35-1.55	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20			
	14-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Fax-----	0-3	8-18	1.40-1.60	2.0-6.0	0.04-0.07	7.4-8.4	<2	Low-----	0.10	2	6	2-4
	3-12	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.15			
	12-22	14-28	1.40-1.60	0.2-0.6	0.06-0.09	7.9-8.4	<2	Low-----	0.15			
	22-48	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1287*:												
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Izar-----	0-3	18-25	1.15-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	1	6	1-2
	3-14	18-25	1.20-1.30	0.6-2.0	0.05-0.11	7.4-8.4	<2	Low-----	0.10			
	14-18	---	---	0.0-0.01	---	---	---	---	---			
Biken-----	0-3	8-18	1.45-1.65	2.0-6.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17	1	5	1-2
	3-18	8-18	1.45-1.65	0.6-2.0	0.09-0.12	8.5-9.0	<2	Low-----	0.17			
	18-30	---	---	0.0-20.0	---	---	---	---	---			
	30-34	---	---	0.0-0.01	---	---	---	---	---			
1288*:												
Urmafot-----	0-9	18-27	1.25-1.45	0.6-2.0	0.10-0.15	7.9-8.4	<2	Moderate	0.20	1	6	2-4
	9-32	---	---	0.0-0.01	---	---	---	---	---			
	32-60	5-15	1.50-1.70	2.0-6.0	0.03-0.06	7.9-8.4	<2	Low-----	0.02			
Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.12-0.14	7.9-9.0	<2	Low-----	0.15	2	8	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	---	---			
Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			
1291*:												
Maderbak-----	0-3	25-35	1.30-1.50	0.2-0.6	0.09-0.11	7.4-8.4	<2	Moderate	0.15	2	8	1-2
	3-17	35-50	1.25-1.45	0.2-0.6	0.08-0.10	7.4-8.4	<2	Moderate	0.10			
	17-29	35-50	1.30-1.50	0.2-0.6	0.08-0.10	7.9-9.0	<2	Moderate	0.10			
	29	---	---	0.0-0.01	---	---	---	---	---			
McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.08-0.17	6.6-7.3	<2	Low-----	0.17	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Moderate	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
1300*:												
Barfan-----	0-2	5-15	0.80-0.95	0.6-2.0	0.21-0.42	7.9-9.0	<2	Low-----	0.20	1	4	.8-2
	2-11	5-15	0.80-0.95	0.6-2.0	0.25-0.50	7.9-9.0	<2	Low-----	0.20			
	11	---	---	0.0-0.01	---	---	---	---	---			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
1310*:												
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			
Duffer-----	0-6	20-27	1.35-1.50	0.6-2.0	0.19-0.21	>7.8	>16	Moderate	0.49	5	4L	<1
	6-60	20-35	1.35-1.55	0.2-0.6	0.19-0.21	>7.8	>8	Moderate	0.49			
Kunzler-----	0-10	12-20	1.15-1.35	0.6-6.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37	5	4L	1-2
	10-26	10-18	1.25-1.60	0.6-6.0	0.09-0.17	>7.8	2-4	Low-----	0.24			
	26-60	10-18	1.35-1.60	0.2-0.6	0.11-0.13	>7.8	4-16	Low-----	0.24			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1321----- Sycomat	0-4	5-18	1.40-1.60	2.0-6.0	0.11-0.13	7.9-8.4	<4	Low-----	0.24	5	3	<.5
	4-15	5-18	1.45-1.65	2.0-6.0	0.11-0.13	>8.4	<4	Low-----	0.24			
	15-44	5-18	1.45-1.65	0.6-2.0	0.11-0.13	>8.4	8-16	Low-----	0.24			
	44-60	2-5	1.50-1.70	2.0-6.0	0.08-0.10	>8.4	8-16	Low-----	0.20			
1330*: Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	-----	---			
Dewar-----	0-3	18-25	1.15-1.25	0.6-2.0	0.13-0.17	6.6-8.4	<2	Moderate	0.37	1	7	1-2
	3-12	27-35	1.20-1.35	0.2-0.6	0.12-0.16	6.6-8.4	<4	Moderate	0.37			
	12-18	15-27	1.15-1.35	0.6-2.0	0.12-0.16	7.9-8.4	<8	Low-----	0.43			
	18-60	---	---	0.0-0.01	---	---	---	-----	---			
1340*: Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
1351*: Hyzen-----	0-2	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	2-12	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	12	---	---	0.0-0.01	---	---	---	-----	---			
Kyler-----	0-3	7-18	1.30-1.45	0.6-2.0	0.05-0.07	7.9-9.0	<2	Low-----	0.15	1	5	.5-1
	3-9	7-18	1.25-1.45	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.15			
	9-13	---	---	0.0-0.01	---	---	---	-----	---			
Rock outcrop.												
1360*: Eganroc-----	0-9	18-27	1.25-1.45	0.6-2.0	0.06-0.08	7.4-7.8	<2	Low-----	0.15	2	8	2-4
	9-34	18-27	1.40-1.60	0.6-2.0	0.03-0.06	7.4-8.4	<2	Low-----	0.10			
	34	---	---	0.0-0.01	---	---	---	-----	---			
Hyzen-----	0-1	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	1-6	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	6-10	---	---	0.0-0.01	---	---	---	-----	---			
Hardzem-----	0-1	10-20	1.40-1.60	0.6-2.0	0.10-0.15	7.4-7.8	<2	Low-----	0.20	2	6	1-2
	1-21	20-30	1.40-1.60	0.06-0.2	0.05-0.11	6.6-7.8	<2	Low-----	0.05			
	21-52	---	---	0.0-20.0	---	---	---	-----	---			
	52	---	---	0.0-0.01	---	---	---	-----	---			
1370*: Wardbay-----	0-18	18-27	1.05-1.20	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.10	3	6	2-4
	18-45	18-27	1.10-1.30	0.6-2.0	0.03-0.08	7.9-8.4	<2	Low-----	0.05			
	45	---	---	0.0-0.01	---	---	---	-----	---			
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1370*: Hardol-----	0-12	18-27	1.10-1.30	0.6-2.0	0.07-0.13	7.4-8.4	<2	Low-----	0.28	5	6	2-3
	12-33	20-27	1.10-1.30	0.6-2.0	0.03-0.08	7.4-8.4	<2	Low-----	0.10			
	33-60	20-27	1.10-1.30	0.6-2.0	0.03-0.07	7.9-8.4	<2	Low-----	0.10			
1372*: Wardbay-----	0-18	18-27	1.05-1.20	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.10	3	6	2-4
	18-45	18-27	1.10-1.30	0.6-2.0	0.03-0.08	7.9-8.4	<2	Low-----	0.05			
	45	---	---	0.0-0.01	---	---	---	-----	---			
Hardol-----	0-12	18-27	1.10-1.30	0.6-2.0	0.07-0.13	7.4-8.4	<2	Low-----	0.28	5	6	2-3
	12-33	20-27	1.10-1.30	0.6-2.0	0.03-0.08	7.4-8.4	<2	Low-----	0.10			
	33-60	20-27	1.10-1.30	0.6-2.0	0.03-0.07	7.9-8.4	<2	Low-----	0.10			
Adobe-----	0-5	18-27	1.25-1.45	0.6-2.0	0.08-0.14	7.9-8.4	<2	Low-----	0.15	1	7	2-4
	5-17	18-27	1.35-1.55	0.6-2.0	0.08-0.14	7.9-8.4	<2	-----	---			
	17	---	---	---	---	---	---	-----	---			
1374*: Wardbay-----	0-18	18-27	1.05-1.20	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.10	3	6	2-4
	18-45	18-27	1.10-1.30	0.6-2.0	0.03-0.08	7.9-8.4	<2	Low-----	0.05			
	45	---	---	0.0-0.01	---	---	---	-----	---			
Adobe-----	0-5	18-27	1.25-1.45	0.6-2.0	0.08-0.14	7.9-8.4	<2	Low-----	0.15	1	7	2-4
	5-17	18-27	1.35-1.55	0.6-2.0	0.08-0.14	7.9-8.4	<2	-----	---			
	17	---	---	---	---	---	---	-----	---			
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
1380*: Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.09-0.13	7.9-9.0	<2	Low-----	0.17	2	7	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	-----	---			
Hardol-----	0-12	18-27	1.10-1.30	0.6-2.0	0.07-0.13	7.4-8.4	<2	Low-----	0.28	5	6	2-3
	12-33	20-27	1.10-1.30	0.6-2.0	0.03-0.08	7.4-8.4	<2	Low-----	0.10			
	33-60	20-27	1.10-1.30	0.6-2.0	0.03-0.07	7.9-8.4	<2	Low-----	0.10			
Eganroc-----	0-9	18-27	1.25-1.45	0.6-2.0	0.06-0.08	7.4-7.8	<2	Low-----	0.15	2	8	2-4
	9-34	18-27	1.40-1.60	0.6-2.0	0.03-0.06	7.4-8.4	<2	Low-----	0.10			
	34	---	---	0.0-0.01	---	---	---	-----	---			
1383*: Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.09-0.13	7.9-9.0	<2	Low-----	0.17	2	7	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	-----	---			
Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.07-0.10	7.9-9.0	<2	Low-----	0.10	2	8	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	-----	---			
Rock outcrop.												
1384*: Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.09-0.13	7.9-9.0	<2	Low-----	0.17	2	7	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1384*:												
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.07-0.10	7.9-9.0	<2	Low-----	0.10	2	8	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	-----	---			
1385*:												
Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.09-0.13	7.9-9.0	<2	Low-----	0.17	2	7	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	-----	---			
Hyzen-----	0-2	8-18	1.20-1.40	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.17	1	8	2-5
	2-12	10-18	1.20-1.40	0.6-2.0	0.05-0.08	7.9-8.4	<2	Low-----	0.15			
	12	---	---	0.0-0.01	---	---	---	-----	---			
Xine-----	0-7	10-18	1.15-1.30	2.0-6.0	0.08-0.10	7.4-8.4	<2	Low-----	0.10	2	7	2-4
	7-35	10-18	1.15-1.35	2.0-6.0	0.08-0.11	7.9-9.0	<2	Low-----	0.10			
	35-39	---	---	0.0-0.01	---	---	---	-----	---			
1390*:												
Chen-----	0-7	20-27	1.10-1.25	0.6-2.0	0.08-0.12	6.1-7.8	<2	Low-----	0.10	1	8	2-3
	7-17	40-55	1.25-1.40	<0.06	0.05-0.09	6.1-7.8	<2	Moderate	0.10			
	17-21	---	---	0.0-0.01	---	---	---	-----	---			
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
McIvey-----	0-5	20-27	1.05-1.20	0.6-2.0	0.12-0.15	6.6-7.3	<2	Moderate	0.15	5	7	2-5
	5-12	20-27	1.15-1.35	0.6-2.0	0.10-0.12	6.6-7.3	<2	Moderate	0.15			
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Moderate	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
1391*:												
Chen-----	0-7	20-27	1.10-1.25	0.6-2.0	0.08-0.12	6.1-7.8	<2	Low-----	0.10	1	8	2-3
	7-17	40-55	1.25-1.40	<0.06	0.05-0.09	6.1-7.8	<2	Moderate	0.10			
	17-21	---	---	0.0-0.01	---	---	---	-----	---			
Tusel-----	0-13	10-20	1.20-1.40	0.6-2.0	0.13-0.15	6.1-7.3	<2	Low-----	0.20	3	6	2-5
	13-42	25-35	1.25-1.45	0.2-0.6	0.08-0.11	6.1-7.3	<2	Moderate	0.20			
	42-46	---	---	0.0-0.01	---	---	---	-----	---			
1392*:												
Chen-----	0-7	20-27	1.10-1.25	0.6-2.0	0.08-0.12	6.1-7.8	<2	Low-----	0.10	1	8	2-3
	7-17	40-55	1.25-1.40	<0.06	0.05-0.09	6.1-7.8	<2	Moderate	0.10			
	17-21	---	---	0.0-0.01	---	---	---	-----	---			
McIvey-----	0-5	20-27	1.05-1.20	0.6-2.0	0.12-0.15	6.6-7.3	<2	Moderate	0.15	5	7	2-5
	5-12	20-27	1.15-1.35	0.6-2.0	0.10-0.12	6.6-7.3	<2	Moderate	0.15			
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Moderate	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
Birchcreek-----	0-3	15-25	1.35-1.55	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	2	8	1-3
	3-10	35-40	1.30-1.50	0.2-0.6	0.09-0.12	6.6-7.8	<2	Moderate	0.10			
	10-28	40-50	1.25-1.45	0.06-0.2	0.07-0.11	6.6-7.8	<2	High-----	0.05			
	28	---	---	---	---	---	---	-----	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1400*:												
Suak-----	0-10	10-20	1.20-1.40	0.6-2.0	0.04-0.07	6.6-7.3	<2	Low-----	0.05	2	8	2-5
	10-25	20-27	1.30-1.50	0.6-2.0	0.03-0.06	7.4-7.8	<2	Moderate	0.02			
	25	---	---	0.0-0.01	---	---	---	-----	---			
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.10-0.15	6.6-7.3	<2	Moderate	0.05	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Low-----	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			
1430*:												
Hardzem-----	0-1	10-20	1.40-1.60	0.6-2.0	0.10-0.15	7.4-7.8	<2	Low-----	0.20	2	6	1-2
	1-21	20-30	1.40-1.60	0.06-0.2	0.05-0.11	6.6-7.8	<2	Low-----	0.05			
	21-52	---	---	0.0-20.0	---	---	---	-----	---			
	52	---	---	0.0-0.01	---	---	---	-----	---			
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	-----	---			
Wardbay-----	0-18	18-27	1.05-1.20	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.10	3	6	2-4
	18-45	18-27	1.10-1.30	0.6-2.0	0.03-0.08	7.9-8.4	<2	Low-----	0.05			
	45	---	---	0.0-0.01	---	---	---	-----	---			
1431*:												
Hardzem-----	0-1	10-20	1.40-1.60	0.6-2.0	0.10-0.15	7.4-7.8	<2	Low-----	0.20	2	6	1-2
	1-21	20-30	1.40-1.60	0.06-0.2	0.05-0.11	6.6-7.8	<2	Low-----	0.05			
	21-52	---	---	0.0-20.0	---	---	---	-----	---			
	52	---	---	0.0-0.01	---	---	---	-----	---			
Hackwood-----	0-22	17-27	1.10-1.25	0.6-2.0	0.12-0.15	6.1-7.3	<2	Moderate	0.10	5	8	2-4
	22-31	15-27	1.25-1.35	0.6-2.0	0.10-0.17	6.1-7.3	<2	Moderate	0.28			
	31-60	25-35	1.35-1.45	0.6-2.0	0.08-0.14	6.1-7.3	<2	Moderate	0.15			
Guiser-----	0-7	12-22	1.35-1.50	2.0-6.0	0.08-0.09	6.6-7.8	<2	Low-----	0.05	3	8	1-3
	7-15	5-18	1.35-1.55	2.0-6.0	0.05-0.07	6.6-7.8	<2	Low-----	0.05			
	15-36	18-25	1.35-1.50	0.6-2.0	0.05-0.07	6.6-7.8	<2	Low-----	0.05			
	36-60	5-12	1.40-1.55	6.0-20	0.04-0.06	6.6-7.8	<2	Low-----	0.02			
1451*:												
Birchcreek-----	0-3	15-25	1.20-1.30	0.6-2.0	0.09-0.12	6.6-7.8	<2	Low-----	0.10	2	8	1-3
	3-10	28-35	1.35-1.45	0.2-0.6	0.09-0.12	6.6-7.8	<2	Moderate	0.10			
	10-28	40-55	1.25-1.40	0.06-0.2	0.07-0.11	6.6-7.8	<2	High-----	0.05			
	28-32	---	---	---	---	---	---	-----	---			
Segura-----	0-3	15-20	1.35-1.55	0.6-2.0	0.08-0.12	6.6-8.4	<2	Moderate	0.10	1	7	1-3
	3-14	20-35	1.40-1.60	0.6-2.0	0.14-0.16	6.6-8.4	<2	Moderate	0.24			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
Chen-----	0-7	20-27	1.10-1.25	0.6-2.0	0.08-0.12	6.1-7.8	<2	Low-----	0.10	1	8	2-3
	7-17	40-55	1.25-1.40	<0.06	0.05-0.09	6.1-7.8	<2	Moderate	0.10			
	17-21	---	---	0.0-0.01	---	---	---	-----	---			
1460-----												
Unsel	0-4	15-20	1.35-1.55	2.0-6.0	0.10-0.13	7.9-9.0	<2	Low-----	0.20	3	4	<.5
	4-14	27-35	1.25-1.45	0.2-0.6	0.10-0.17	7.4-9.0	<2	Moderate	0.20			
	14-22	10-25	1.35-1.55	0.6-2.0	0.07-0.12	8.5-9.0	4-8	Low-----	0.20			
	22-60	2-8	1.50-1.70	6.0-20.0	0.03-0.05	8.5-9.0	4-8	Low-----	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm		K	T	group	Pct
1480*: Amelar-----	0-6	18-27	1.05-1.25	0.6-2.0	0.07-0.11	7.4-8.4	<2	Low-----	0.15	5	7	2-4
	6-15	27-35	1.15-1.30	0.2-0.6	0.08-0.13	7.9-8.4	<2	Low-----	0.15			
	15-60	18-27	1.20-1.40	0.6-2.0	0.08-0.14	7.9-9.0	<2	Low-----	0.15			
Bobs-----	0-3	10-20	1.15-1.35	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.15	1	6	1-3
	3-14	10-20	1.25-1.45	0.6-2.0	0.14-0.17	7.9-9.0	<2	Low-----	0.37			
	14-18	---	---	0.0-0.01	---	---	---	-----	---			
1491*: Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	-----	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
1492*: Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
Shabliss-----	0-3	8-18	1.35-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<4	Low-----	0.37	1	5	1-2
	3-13	5-15	1.35-1.55	0.6-2.0	0.13-0.17	7.9-8.4	<4	Low-----	0.32			
	13-55	---	---	0.0-0.01	---	---	---	-----	---			
Linoyer-----	0-4	12-18	1.30-1.50	0.6-2.0	0.15-0.17	7.9-9.0	<2	Low-----	0.43	5	3	.5-1
	4-60	12-18	1.30-1.50	0.6-2.0	0.05-0.18	7.9-9.0	<2	Low-----	0.49			
1493*: Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			
Parisa-----	0-4	8-18	1.50-1.65	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.20	2	5	1-2
	4-26	8-18	1.50-1.70	0.6-2.0	0.04-0.12	7.9-9.0	<2	Low-----	0.10			
	26-47	---	---	0.0-0.01	---	---	<2	-----	---			
	47-60	0-8	1.60-1.75	6.0-20	0.03-0.11	7.9-9.0	<2	Low-----	0.02			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
1494*: Pyrat-----	0-6	12-20	1.40-1.60	2.0-6.0	0.08-0.10	7.9-8.4	2-4	Low-----	0.15	5	4	1-2
	6-17	10-18	1.45-1.65	2.0-6.0	0.05-0.08	7.9-8.4	2-4	Low-----	0.10			
	17-27	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.15			
	27-39	10-18	1.50-1.70	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10			
	39-60	5-10	1.45-1.65	6.0-20	0.03-0.05	7.9-9.0	2-4	Low-----	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1494*: McConnel-----	0-3	7-15	1.35-1.50	2.0-6.0	0.12-0.15	6.6-8.4	<2	Low-----	0.32	2	4	1-2
	3-11	5-15	1.40-1.60	2.0-6.0	0.12-0.15	6.6-8.4	<2	Low-----	0.32			
	11-42	0-5	1.45-1.60	>20	0.03-0.05	>7.8	>2	Low-----	0.02			
	42-60	5-15	1.40-1.60	2.0-6.0	0.10-0.13	>7.8	>2	Low-----	0.20			
1510*: Raph-----	0-4	18-25	1.40-1.60	0.6-2.0	0.19-0.21	7.9-9.0	<4	Moderate	0.43	5	5	<.5
	4-30	20-27	1.40-1.60	0.6-2.0	0.18-0.20	7.9-9.0	<4	Moderate	0.37			
	30-42	15-20	1.50-1.65	2.0-6.0	0.08-0.10	7.9-9.0	<4	Low-----	0.20			
	42-60	6-15	1.50-1.70	2.0-6.0	0.06-0.08	7.9-9.0	<4	Low-----	0.10			
Zimwala-----	0-13	20-27	1.30-1.50	0.6-2.0	0.19-0.21	8.5-9.0	8-16	Moderate	0.43	5	4L	<1
	13-40	25-35	1.30-1.50	0.06-0.2	0.19-0.21	>8.4	>16	Moderate	0.37			
	40-60	40-50	1.50-1.70	<0.06	0.15-0.17	>9.0	>16	High-----	0.28			
Heist-----	0-3	8-18	1.35-1.55	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	.6-1
	3-36	8-18	1.45-1.65	2.0-6.0	0.11-0.13	7.9-9.0	2-4	Low-----	0.24			
	36-60	8-18	1.45-1.65	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
1511*: Hessing-----	0-4	15-20	1.25-1.45	0.6-2.0	0.19-0.21	7.9-9.0	2-4	Low-----	0.55	3	5	<.5
	4-15	20-30	1.25-1.45	0.2-0.6	0.19-0.21	7.9-9.0	2-4	Moderate	0.49			
	15-31	15-27	1.40-1.55	0.6-2.0	0.14-0.16	8.5-9.0	4-16	Low-----	0.32			
	31-60	0-5	1.50-1.70	>20	0.03-0.06	7.9-9.0	>16	Low-----	0.05			
Uwell-----	0-3	22-27	1.25-1.45	0.6-2.0	0.18-0.21	8.5-9.0	<4	Moderate	0.43	5	4L	1-2
	3-26	22-27	1.30-1.50	0.2-0.6	0.18-0.21	8.5-9.0	<4	Moderate	0.43			
	26-60	27-50	1.50-1.70	0.06-0.2	0.14-0.21	8.5-9.0	<4	High-----	0.24			
Zimwala-----	0-13	20-27	1.30-1.50	0.6-2.0	0.19-0.21	8.5-9.0	8-16	Moderate	0.43	5	4L	<1
	13-40	25-35	1.30-1.50	0.06-0.2	0.19-0.21	>8.4	>16	Moderate	0.37			
	40-60	40-50	1.50-1.70	<0.06	0.15-0.17	>9.0	>16	High-----	0.28			
1520*: Fax-----	0-3	8-18	1.40-1.60	2.0-6.0	0.04-0.07	7.4-8.4	<2	Low-----	0.10	2	6	2-4
	3-12	20-35	1.35-1.55	0.2-0.6	0.06-0.10	7.4-8.4	<2	Low-----	0.15			
	12-22	14-28	1.40-1.60	0.2-0.6	0.06-0.09	7.9-8.4	<2	Low-----	0.15			
	22-48	---	---	0.0-0.01	---	---	---	---	---			
Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	---	---			
Broland-----	0-3	10-25	1.15-1.35	0.6-2.0	0.10-0.12	7.9-8.4	<2	Low-----	0.15	1	7	1-2
	3-9	27-40	1.35-1.55	0.2-0.6	0.05-0.07	7.9-8.4	<2	Low-----	0.15			
	9-16	20-35	1.40-1.60	0.6-2.0	0.05-0.07	7.9-8.4	<2	Low-----	0.05			
	16-19	10-20	1.45-1.65	2.0-6.0	0.03-0.05	7.9-8.4	<2	Low-----	0.05			
	19-40	---	---	0.0-0.01	---	---	---	---	---			
	40-60	1-5	1.50-1.65	>20	0.03-0.05	7.9-8.4	<2	Low-----	0.02			
1550*: Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
Muiral-----	0-9	12-18	1.25-1.45	0.6-2.0	0.12-0.15	5.6-6.5	<2	Low-----	0.20	2	6	3-5
	9-33	12-18	1.35-1.55	0.6-2.0	0.08-0.12	6.1-7.3	<2	Low-----	0.10			
	33	---	---	0.0-0.01	---	---	---	---	---			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1550*: Wardbay-----	0-18	18-27	1.05-1.20	0.6-2.0	0.06-0.12	7.4-8.4	<2	Low-----	0.10	3	6	2-4
	18-45	18-27	1.10-1.30	0.6-2.0	0.03-0.08	7.9-8.4	<2	Low-----	0.05			
	45	---	---	0.0-0.01	---	---	---	---	---			
1560*: Adobe-----	0-5	18-27	1.25-1.45	0.6-2.0	0.08-0.14	7.9-8.4	<2	Low-----	0.15	1	7	2-4
	5-17	18-27	1.35-1.55	0.6-2.0	0.08-0.14	7.9-8.4	<2	-----	---			
	17	---	---	---	---	---	---	---	---			
Haunchee-----	0-5	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.4-8.4	<2	Low-----	0.15	1	7	3-5
	5-16	10-20	1.05-1.25	0.6-2.0	0.09-0.11	7.9-9.0	<2	Low-----	0.15			
	16-20	---	---	0.0-0.01	---	---	---	---	---			
Hardzem-----	0-1	10-20	1.40-1.60	0.6-2.0	0.10-0.15	7.4-7.8	<2	Low-----	0.20	2	6	1-2
	1-21	20-30	1.40-1.60	0.06-0.2	0.05-0.11	6.6-7.8	<2	Low-----	0.05			
	21-52	---	---	0.0-20.0	---	---	---	---	---			
	52	---	---	0.0-0.01	---	---	---	---	---			
1570*: Nyala-----	0-3	12-20	1.45-1.60	2.0-6.0	0.10-0.13	7.9-9.0	<4	Low-----	0.20	5	3	<.5
	3-12	27-35	1.30-1.50	0.2-0.6	0.15-0.17	>8.4	<4	Moderate	0.32			
	12-56	12-20	1.55-1.70	0.2-0.6	0.10-0.13	>8.4	<4	Low-----	0.20			
	56-60	3-8	1.55-1.70	6.0-20	0.05-0.08	>8.4	<4	Low-----	0.10			
Broyles-----	0-12	5-15	1.35-1.55	0.6-2.0	0.13-0.16	7.9-9.0	2-4	Low-----	0.55	5	3	<1
	12-60	5-15	1.40-1.60	2.0-6.0	0.09-0.11	>8.4	4-16	Low-----	0.24			
1580*: Wredah-----	0-5	15-20	1.35-1.50	0.2-0.6	0.09-0.12	7.9-8.4	<2	Low-----	0.17	5	4	1-3
	5-17	25-35	1.30-1.50	0.2-0.6	0.10-0.13	7.9-9.0	<2	Moderate	0.15			
	17-34	5-15	1.40-1.60	2.0-6.0	0.07-0.10	7.9-9.0	<2	Low-----	0.10			
	34-60	5-15	1.40-1.60	0.6-2.0	0.03-0.05	7.9-9.0	<2	Low-----	0.05			
Selti-----	0-4	5-16	1.30-1.50	2.0-6.0	0.05-0.07	7.4-8.4	<2	Low-----	0.10	5	8	1-2
	4-30	18-25	1.40-1.60	0.6-2.0	0.07-0.10	7.4-8.4	<2	Low-----	0.10			
	30-60	1-5	1.45-1.65	6.0-20	0.04-0.06	7.9-8.4	<2	Low-----	0.05			
Tulase-----	0-2	8-18	1.25-1.40	0.6-2.0	0.19-0.21	7.9-8.4	<2	Low-----	0.55	5	4L	1-2
	2-60	8-18	1.30-1.50	0.6-2.0	0.15-0.21	7.9-9.0	<2	Low-----	0.55			
1610*: Sheffit-----	0-3	17-27	1.40-1.60	0.6-2.0	0.19-0.21	>8.4	4-8	Low-----	0.55	5	4L	<1
	3-60	35-50	1.40-1.60	<0.06	0.14-0.17	>8.4	8-16	High-----	0.28			
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
1700*: Garfan-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.4-7.8	<2	Low-----	0.20	1	7	1-2
	8-27	35-45	1.25-1.45	<0.06	0.03-0.06	6.6-8.4	<2	Moderate	0.02			
	27-60	35-45	1.25-1.45	<0.06	0.03-0.06	6.6-8.4	<2	Moderate	0.02			
Garfan-----	0-8	18-27	1.25-1.45	0.6-2.0	0.06-0.12	7.4-7.8	<2	Low-----	0.20	1	7	1-2
	8-27	35-45	1.25-1.45	<0.06	0.03-0.06	6.6-8.4	<2	Moderate	0.02			
	27-60	35-45	1.25-1.45	<0.06	0.03-0.06	6.6-8.4	<2	Moderate	0.02			
McIvey-----	0-12	20-27	1.05-1.20	0.6-2.0	0.10-0.15	6.6-7.3	<2	Moderate	0.05	5	8	2-5
	12-18	30-40	1.25-1.45	0.2-0.6	0.12-0.17	6.1-7.3	<2	Low-----	0.10			
	18-62	40-50	1.25-1.40	<0.06	0.07-0.10	6.1-7.3	<2	Moderate	0.05			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1800*: Pookaloo-----	0-4	10-18	1.20-1.35	0.6-2.0	0.06-0.09	7.9-8.4	<2	Low-----	0.20	1	6	1-2
	4-19	10-18	1.35-1.50	0.6-2.0	0.11-0.13	7.9-8.4	<2	Low-----	0.20			
	19	---	---	0.0-0.01	---	---	---	---	---			
Onkeyo-----	0-8	18-27	1.10-1.30	0.6-2.0	0.06-0.13	7.4-8.4	<2	Low-----	0.10	1	6	2-4
	8-15	27-35	1.20-1.40	0.2-0.6	0.04-0.10	7.4-8.4	<2	Low-----	0.05			
	15	---	---	0.0-0.01	---	---	---	---	---			
Cavehill-----	0-15	18-27	1.05-1.20	0.6-2.0	0.12-0.14	7.9-9.0	<2	Low-----	0.15	2	8	4-6
	15-27	18-27	1.10-1.30	0.6-2.0	0.08-0.11	7.9-9.0	<2	Low-----	0.17			
	27-31	---	---	0.0-0.01	---	---	---	---	---			
1810*: Ilton-----	0-4	5-10	1.35-1.55	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	1-2
	4-24	10-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20			
	24-36	10-18	1.45-1.65	0.2-0.6	0.07-0.09	7.9-8.4	<2	Low-----	0.20			
	36	---	---	0.0-0.01	---	---	---	---	---			
Yody-----	0-4	5-10	1.35-1.50	2.0-6.0	0.07-0.09	7.9-8.4	<2	Low-----	0.20	2	4	.7-2
	4-30	20-35	1.30-1.50	0.6-2.0	0.15-0.18	7.9-8.4	2-4	Moderate	0.20			
	30-36	5-10	1.55-1.70	2.0-6.0	0.09-0.11	7.9-8.4	2-4	Low-----	0.20			
	36-60	---	---	0.0-0.01	---	---	---	---	---			
Blimo-----	0-8	12-18	1.35-1.55	0.6-2.0	0.12-0.16	7.9-8.4	<2	Low-----	0.20	5	5	1-2
	8-21	12-18	1.40-1.60	2.0-6.0	0.07-0.09	7.9-8.4	2-4	Low-----	0.10			
	21-60	12-18	1.40-1.60	0.06-0.2	0.07-0.09	7.9-9.0	2-4	Low-----	0.24			
1820*: Sodhouse-----	0-9	10-18	1.40-1.55	0.6-2.0	0.14-0.16	7.9-9.0	<2	Low-----	0.28	1	6	<.5
	9-14	10-18	1.40-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<2	Low-----	0.28			
	14-25	---	---	0.0-0.01	---	---	---	---	---			
	25-60	2-15	1.45-1.65	0.6-2.0	0.07-0.11	7.9-9.0	<4	Low-----	0.24			
Sodhouse-----	0-6	10-18	1.40-1.55	0.6-2.0	0.14-0.16	7.9-9.0	<2	Low-----	0.28	1	6	<.5
	6-14	10-18	1.40-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<2	Low-----	0.28			
	14-25	---	---	0.0-0.01	---	---	---	---	---			
	25-60	2-15	1.45-1.65	0.6-2.0	0.07-0.11	7.9-9.0	<4	Low-----	0.24			
1821*: Sodhouse-----	0-9	10-18	1.40-1.55	0.6-2.0	0.14-0.16	7.9-9.0	<2	Low-----	0.28	1	6	<.5
	9-14	10-18	1.40-1.55	0.6-2.0	0.13-0.16	7.9-8.4	<2	Low-----	0.28			
	14-25	---	---	0.0-0.01	---	---	---	---	---			
	25-60	2-15	1.45-1.65	0.6-2.0	0.07-0.11	7.9-9.0	<4	Low-----	0.24			
Palinor-----	0-10	10-18	1.30-1.50	0.6-2.0	0.10-0.15	7.9-9.0	<2	Low-----	0.24	1	5	1-2
	10-18	10-18	1.40-1.60	0.6-2.0	0.04-0.09	7.9-9.0	2-4	Low-----	0.10			
	18-30	---	---	0.0-0.01	---	---	---	---	---			
	30-60	2-8	1.50-1.70	6.0-20	0.03-0.08	7.9-9.0	<2	Low-----	0.05			
1830*: Armespan-----	0-1	10-18	1.40-1.55	2.0-6.0	0.05-0.08	7.9-9.0	2-4	Low-----	0.10	5	5	.8-2
	1-4	10-18	1.40-1.55	2.0-6.0	0.07-0.09	7.9-9.0	2-4	Low-----	0.20			
	4-10	12-18	1.35-1.50	0.6-2.0	0.09-0.12	7.9-9.0	8-16	Low-----	0.24			
	10-36	10-18	1.45-1.65	0.6-2.0	0.05-0.08	7.9-9.0	8-16	Low-----	0.10			
	36-60	5-10	1.45-1.60	6.0-20	0.02-0.05	7.9-9.0	2-4	Low-----	0.05			
Cliffdown-----	0-3	10-15	1.40-1.55	2.0-6.0	0.05-0.07	7.9-9.0	<2	Low-----	0.10	5	5	<.5
	3-60	5-15	1.40-1.60	2.0-6.0	0.06-0.07	7.9-9.0	<8	Low-----	0.20			

See footnote at end of table.

TABLE 9.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Soil reaction	Salinity	Shrink- swell potential	Erosion factors		Wind erodi- bility group	Organic matter
									K	T		
	In	Pct	g/cc	In/hr	In/in	pH	mmhos/cm					Pct
1830*: Candelaria-----	0-1	10-15	1.50-1.70	0.6-2.0	0.07-0.09	>8.4	<4	Low-----	0.10	5	5	<.5
	1-3	10-15	1.50-1.70	0.6-2.0	0.09-0.12	>8.4	<4	Low-----	0.20			
	3-22	8-15	1.40-1.60	0.6-2.0	0.04-0.07	>8.4	>8	Low-----	0.10			
	22-60	4-10	1.45-1.65	2.0-6.0	0.03-0.05	>8.4	4-8	Low-----	0.05			
1850*: Clanalpine-----	0-10	12-20	1.20-1.40	0.6-2.0	0.09-0.11	6.6-7.3	<2	Low-----	0.17	2	8	1-3
	10-30	25-35	1.30-1.50	0.2-0.6	0.12-0.14	6.6-7.8	<2	Moderate	0.17			
	30-34	---	---	0.0-0.01	---	---	---	-----	---			
Rubble land-----	0-60	0	---	>20	0.-0.1	---	<2	Low-----	---	---	8	<.1
Rock outcrop.												
1860*: Hackwood-----	0-22	17-27	1.10-1.25	0.6-2.0	0.12-0.15	6.1-7.3	<2	Moderate	0.10	5	8	2-4
	22-31	15-27	1.25-1.35	0.6-2.0	0.10-0.17	6.1-7.3	<2	Moderate	0.28			
	31-60	25-35	1.35-1.45	0.6-2.0	0.08-0.14	6.1-7.3	<2	Moderate	0.15			
Chen-----	0-7	20-27	1.10-1.25	0.6-2.0	0.08-0.12	6.1-7.8	<2	Low-----	0.10	1	8	2-3
	7-17	40-55	1.25-1.40	<0.06	0.05-0.09	6.1-7.8	<2	Moderate	0.10			
	17-21	---	---	0.0-0.01	---	---	---	-----	---			
Tusel-----	0-13	10-20	1.20-1.40	0.6-2.0	0.13-0.15	6.1-7.3	<2	Low-----	0.20	3	6	2-5
	13-42	25-35	1.25-1.45	0.2-0.6	0.08-0.11	6.1-7.3	<2	Moderate	0.20			
	42-46	---	---	0.0-0.01	---	---	---	-----	---			

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 10.--WATER FEATURES

("Flooding," "water table," and terms such as "rare," "brief," and "apparent" are explained in the text. The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
100*: Pookaloo-----	C	None-----	---	---	>6.0	---	---
Cavehill-----	C	None-----	---	---	>6.0	---	---
Rock outcrop.							
104*: Pookaloo-----	C	None-----	---	---	>6.0	---	---
Zimbob-----	D	None-----	---	---	>6.0	---	---
Hyzen-----	D	None-----	---	---	>6.0	---	---
108*: Pookaloo-----	C	None-----	---	---	>6.0	---	---
Tecomar-----	D	None-----	---	---	>6.0	---	---
Rock outcrop.							
109*: Hyzen-----	D	None-----	---	---	>6.0	---	---
Cavehill-----	C	None-----	---	---	>6.0	---	---
Hyzen-----	D	None-----	---	---	>6.0	---	---
110*: Zimbob-----	D	None-----	---	---	>6.0	---	---
Zimbob-----	D	None-----	---	---	>6.0	---	---
111*: Zimbob-----	D	None-----	---	---	>6.0	---	---
Hyzen-----	D	None-----	---	---	>6.0	---	---
Rock outcrop.							
113*: Zimbob-----	D	None-----	---	---	>6.0	---	---
Zimbob-----	D	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
119*: Zimbob-----	D	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
120*: Tecomar-----	D	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
120*: Zimbob-----	D	None-----	---	---	>6.0	---	---
124*: Tecomar-----	D	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
Tecomar-----	D	None-----	---	---	>6.0	---	---
126*: Tecomar-----	D	None-----	---	---	>6.0	---	---
Xine-----	C	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
160*: Zerk-----	B	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
Tosser-----	B	None-----	---	---	>6.0	---	---
162*: Broyles-----	B	None-----	---	---	>6.0	---	---
Kunzler-----	B	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
166*: Tosser-----	B	None-----	---	---	>6.0	---	---
Pyrat-----	B	None-----	---	---	>6.0	---	---
Linoyer-----	B	None-----	---	---	>6.0	---	---
170*: Blimo-----	C	None-----	---	---	>6.0	---	---
Hessing-----	B	None-----	---	---	>6.0	---	---
Zerk-----	B	None-----	---	---	>6.0	---	---
173*: Tulase-----	B	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
174*: Blimo-----	C	None-----	---	---	>6.0	---	---
Pyrat-----	B	None-----	---	---	>6.0	---	---
179*: Tulase-----	B	None-----	---	---	>6.0	---	---
Pern-----	B	Rare-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
181*: Pyrat-----	B	None-----	---	---	>6.0	---	---
Cowgil-----	B	None-----	---	---	>6.0	---	---
Broyles-----	B	None-----	---	---	>6.0	---	---
185*: Pyrat-----	B	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
189*: Pyrat-----	B	None-----	---	---	>6.0	---	---
Linoyer-----	B	None-----	---	---	>6.0	---	---
190*: Cowgil-----	B	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
Fax-----	C	None-----	---	---	>6.0	---	---
192*: Cowgil-----	B	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
201*: Hyzen-----	D	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
Tecomar-----	D	None-----	---	---	>6.0	---	---
205*: Hyzen-----	D	None-----	---	---	>6.0	---	---
Hardzem-----	C	None-----	---	---	>6.0	---	---
Rock outcrop.							
220*: Hutchley-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
Suak-----	C	None-----	---	---	>6.0	---	---
223*: Hutchley-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
224*: Hutchley-----	D	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
224*: McIvey-----	C	None-----	---	---	>6.0	---	---
Segura-----	D	None-----	---	---	>6.0	---	---
226*: Hutchley-----	D	None-----	---	---	>6.0	---	---
Tusel-----	B	None-----	---	---	>6.0	---	---
Suak-----	C	None-----	---	---	>6.0	---	---
230*: Linoyer-----	B	None-----	---	---	>6.0	---	---
Katelana-----	B	None-----	---	---	>6.0	---	---
231----- Linoyer	B	None-----	---	---	>6.0	---	---
232*: Linoyer-----	B	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
233----- Linoyer	B	None-----	---	---	>6.0	---	---
241*: Katelana-----	B	None-----	---	---	>6.0	---	---
Raph-----	B	Rare-----	---	---	>6.0	---	---
242*: Katelana-----	B	None-----	---	---	>6.0	---	---
Katelana-----	B	None-----	---	---	>6.0	---	---
243*: Katelana-----	B	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
Nyak-----	B	Rare-----	---	---	>6.0	---	---
244*: Katelana-----	B	None-----	---	---	>6.0	---	---
Raph-----	B	Rare-----	---	---	>6.0	---	---
246*: Katelana-----	B	None-----	---	---	>6.0	---	---
Blimo-----	C	None-----	---	---	>6.0	---	---
250*: Sheffit-----	D	None-----	---	---	5.0-6.0	Apparent	Jan-May
Katelana-----	B	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
252*: Sheffit-----	D	None-----	---	---	5.0-6.0	Apparent	Jan-May
Equis-----	D	Rare-----	---	---	3.0-5.0	Apparent	Feb-Apr
Equis-----	D	Rare-----	---	---	1.0-3.0	Apparent	Feb-Apr
253*: Sheffit-----	D	None-----	---	---	>6.0	---	---
Sheffit-----	D	None-----	---	---	5.0-6.0	Apparent	Jan-May
Zorravista-----	A	None-----	---	---	>6.0	---	---
254*: Sheffit-----	D	None-----	---	---	5.0-6.0	Apparent	Jan-May
Boofuss-----	C	Rare-----	---	---	4.0-6.0	Apparent	Jan-Jul
255*: Sheffit-----	D	None-----	---	---	5.0-6.0	Apparent	Jan-May
Sheffit-----	D	None-----	---	---	5.0-6.0	Apparent	Jan-May
Kunzler-----	B	None-----	---	---	>6.0	---	---
262----- Equis	D	Rare-----	---	---	1.0-3.0	Apparent	Feb-Apr
266*: Equis-----	D	Rare-----	---	---	1.0-3.0	Apparent	Feb-Apr
Equis-----	D	Rare-----	---	---	1.0-3.0	Apparent	Feb-Apr
Kolda-----	D	None-----	---	---	0-1.5	Apparent	Oct-Jun
267*: Equis-----	D	Rare-----	---	---	1.0-3.0	Apparent	Feb-Apr
Devilsgait-----	D	Frequent-----	Long-----	Mar-Jun	0-1.5	Apparent	Feb-Jul
270*: Atlow-----	D	None-----	---	---	>6.0	---	---
Maderbak-----	C	None-----	---	---	>6.0	---	---
Rubble land-----	A	None-----	---	---	>6.0	---	---
271*: Atlow-----	D	None-----	---	---	>6.0	---	---
Atlow-----	D	None-----	---	---	>6.0	---	---
275*: Atlow-----	D	None-----	---	---	>6.0	---	---
Atlow-----	D	None-----	---	---	>6.0	---	---
Upatad-----	D	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
276*:							
Stewval-----	D	None-----	---	---	>6.0	---	---
Maderbak-----	C	None-----	---	---	>6.0	---	---
Atlow-----	D	None-----	---	---	>6.0	---	---
279*:							
Atlow-----	D	None-----	---	---	>6.0	---	---
Broland-----	D	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
282-----	D	None-----	---	---	>6.0	---	---
Palinor							
283*:							
Palinor-----	D	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
286*:							
Palinor-----	D	None-----	---	---	>6.0	---	---
Shabliss-----	D	None-----	---	---	>6.0	---	---
287*:							
Palinor-----	D	None-----	---	---	>6.0	---	---
Wintermute-----	C	None-----	---	---	>6.0	---	---
288*:							
Palinor-----	D	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
Broland-----	D	None-----	---	---	>6.0	---	---
290*:							
Palinor-----	D	None-----	---	---	>6.0	---	---
Shabliss-----	D	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
291*:							
Urmafot-----	D	None-----	---	---	>6.0	---	---
Borvant-----	D	None-----	---	---	>6.0	---	---
Biken-----	D	None-----	---	---	>6.0	---	---
292*:							
Palinor-----	D	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
295*: Palinor-----	D	None-----	---	---	>6.0	---	---
Roden-----	D	None-----	---	---	>6.0	---	---
Roden-----	D	None-----	---	---	>6.0	---	---
296*: Palinor-----	D	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
297*: Urmafot-----	D	None-----	---	---	>6.0	---	---
Amelar-----	B	None-----	---	---	>6.0	---	---
Izar-----	D	None-----	---	---	>6.0	---	---
300*: Playas-----	D	Occasional-----	---	---	+1-1.0	Apparent	Feb-Sep
Orupa-----	B	None-----	---	---	>6.0	---	---
310*: Dune land-----	A	None-----	---	---	>6.0	---	---
Playas-----	D	None-----	---	---	+1-1.0	Apparent	Feb-Sep
321*: Palinor-----	D	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
322*: Palinor-----	D	None-----	---	---	>6.0	---	---
Roden-----	D	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
323*: Urmafot-----	D	None-----	---	---	>6.0	---	---
Bobs-----	D	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
326*: Palinor-----	D	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
Roden-----	D	None-----	---	---	>6.0	---	---
327*: Urmafot-----	D	None-----	---	---	>6.0	---	---
Cassiro-----	C	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
327*: Biken-----	D	None-----	---	---	>6.0	---	---
328*: Urmafot-----	D	None-----	---	---	>6.0	---	---
Tecomar-----	D	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
334*: Parisa-----	C	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
Shabliss-----	D	None-----	---	---	>6.0	---	---
336----- Parisa	C	None-----	---	---	>6.0	---	---
337*: Parisa-----	C	None-----	---	---	>6.0	---	---
Wintermute-----	C	None-----	---	---	>6.0	---	---
338*: Parisa-----	C	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
340*: Izar-----	D	None-----	---	---	>6.0	---	---
Izar-----	D	None-----	---	---	>6.0	---	---
346*: Izar-----	D	None-----	---	---	>6.0	---	---
Roden-----	D	None-----	---	---	>6.0	---	---
Zerk-----	B	None-----	---	---	>6.0	---	---
351*: Heist-----	B	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
353----- Heist	B	None-----	---	---	>6.0	---	---
356*: Heist-----	B	None-----	---	---	>6.0	---	---
Wintermute-----	C	None-----	---	---	>6.0	---	---
360*: Belmill-----	B	None-----	---	---	>6.0	---	---
Belmill-----	B	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
361*: Belmill-----	B	None-----	---	---	>6.0	---	---
Cowgill-----	B	None-----	---	---	>6.0	---	---
Selti-----	B	None-----	---	---	>6.0	---	---
372----- Automal	C	None-----	---	---	>6.0	---	---
373*: Automal-----	C	None-----	---	---	>6.0	---	---
Wintermute-----	C	None-----	---	---	>6.0	---	---
380*: Palinor-----	D	None-----	---	---	>6.0	---	---
Parisa-----	C	None-----	---	---	>6.0	---	---
411*: Cassiro-----	C	None-----	---	---	>6.0	---	---
Cassiro-----	C	None-----	---	---	>6.0	---	---
413*: Cassiro-----	C	None-----	---	---	>6.0	---	---
Fax-----	C	None-----	---	---	>6.0	---	---
Belmill-----	B	None-----	---	---	>6.0	---	---
414*: Cassiro-----	C	None-----	---	---	>6.0	---	---
Belmill-----	B	None-----	---	---	>6.0	---	---
421----- Wintermute	C	None-----	---	---	>6.0	---	---
425*: Wintermute-----	C	None-----	---	---	>6.0	---	---
Wintermute-----	C	None-----	---	---	>6.0	---	---
434*: Pookaloo-----	C	None-----	---	---	>6.0	---	---
Hyzen-----	D	None-----	---	---	>6.0	---	---
Hyzen-----	D	None-----	---	---	>6.0	---	---
436*: Pookaloo-----	C	None-----	---	---	>6.0	---	---
Hyzen-----	D	None-----	---	---	>6.0	---	---
Cavehill-----	C	None-----	---	---	>6.0	---	---
437*: Pookaloo-----	C	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
437*: Urmafot-----	D	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
440*: Hessing-----	B	None-----	---	---	>6.0	---	---
Zerk-----	B	None-----	---	---	>6.0	---	---
450*: Shabliss-----	D	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
455*: Shabliss-----	D	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
Linoyer-----	B	None-----	---	---	>6.0	---	---
458*: Shabliss-----	D	None-----	---	---	>6.0	---	---
Pyrat-----	B	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
471*: Hessing-----	B	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
472*: Broyles-----	B	None-----	---	---	>6.0	---	---
Blimo-----	C	None-----	---	---	>6.0	---	---
473*: Broyles-----	B	None-----	---	---	>6.0	---	---
Sheffit-----	D	None-----	---	---	5.0-6.0	Apparent	Jan-May
Katelana-----	B	None-----	---	---	>6.0	---	---
480*: Pioche-----	D	None-----	---	---	>6.0	---	---
Cropper-----	D	None-----	---	---	>6.0	---	---
481*: Pioche-----	D	None-----	---	---	>6.0	---	---
Segura-----	D	None-----	---	---	>6.0	---	---
Cropper-----	D	None-----	---	---	>6.0	---	---
483*: Pioche-----	D	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
483*: Upatad-----	D	None-----	---	---	>6.0	---	---
Birchcreek-----	C	None-----	---	---	>6.0	---	---
484*: Piocche-----	D	None-----	---	---	>6.0	---	---
Birchcreek-----	C	None-----	---	---	>6.0	---	---
Cropper-----	D	None-----	---	---	>6.0	---	---
486*: Piocche-----	D	None-----	---	---	>6.0	---	---
Cropper-----	D	None-----	---	---	>6.0	---	---
Upatad-----	D	None-----	---	---	>6.0	---	---
489*: Piocche-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
Birchcreek-----	C	None-----	---	---	>6.0	---	---
490----- Kunzler	B	None-----	---	---	>6.0	---	---
491*: Kunzler-----	B	None-----	---	---	>6.0	---	---
Katelana-----	B	None-----	---	---	>6.0	---	---
500*: Segura-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
Hutchley-----	D	None-----	---	---	>6.0	---	---
510*: Onkeyo-----	D	None-----	---	---	>6.0	---	---
Cavehill-----	C	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
520*: McIvey-----	C	None-----	---	---	>6.0	---	---
Piocche-----	D	None-----	---	---	>6.0	---	---
531*: Duffer-----	C	Rare-----	---	---	3.0-5.0	Apparent	Feb-Jun
Uwell-----	C	None-----	---	---	>6.0	---	---
534*: Duffer-----	C	Rare-----	---	---	3.0-5.0	Apparent	Feb-Jun

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
534*:							
Duffer-----	C	Occasional-----	Very brief----	Jan-Jun	1.5-3.0	Apparent	Jan-Jun
Kolda-----	D	None-----	---	---	0-1.5	Apparent	Oct-Jun
540*:							
Kolda-----	D	None-----	---	---	0-1.5	Apparent	Oct-Jun
Sheffit-----	D	None-----	---	---	5.0-6.0	Apparent	Jan-May
Equis-----	D	Rare-----	---	---	1.0-3.0	Apparent	Feb-Apr
541*:							
Kolda-----	D	None-----	---	---	0-1.5	Apparent	Oct-Jun
Duffer-----	C	Occasional-----	Very brief----	Jan-Jun	1.5-3.0	Apparent	Jan-Jun
542*:							
Devilsgait-----	D	Frequent-----	Long-----	Mar-Jun	0-1.5	Apparent	Feb-Jul
Devilsgait-----	D	Frequent-----	Long-----	Mar-Jun	0-1.5	Apparent	Feb-Jul
Duffer-----	C	Occasional-----	Very brief----	Jan-Jun	1.5-3.0	Apparent	Jan-Jun
550*:							
Molion-----	D	None-----	---	---	>6.0	---	---
Unsel-----	B	None-----	---	---	>6.0	---	---
Breko-----	B	None-----	---	---	>6.0	---	---
552-----	D	None-----	---	---	>6.0	---	---
Molion							
561*:							
McIvey-----	C	None-----	---	---	>6.0	---	---
Pioche-----	D	None-----	---	---	>6.0	---	---
Upatad-----	D	None-----	---	---	>6.0	---	---
564*:							
McIvey-----	C	None-----	---	---	>6.0	---	---
Chen-----	D	None-----	---	---	>6.0	---	---
Suak-----	C	None-----	---	---	>6.0	---	---
566*:							
McIvey-----	C	None-----	---	---	>6.0	---	---
Segura-----	D	None-----	---	---	>6.0	---	---
Cropper-----	D	None-----	---	---	>6.0	---	---
567*:							
McIvey-----	C	None-----	---	---	>6.0	---	---
Birchcreek-----	C	None-----	---	---	>6.0	---	---
Hutchley-----	D	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
570*: Yody-----	C	None-----	---	---	>6.0	---	---
Blimo-----	C	None-----	---	---	>6.0	---	---
McConnel-----	B	None-----	---	---	>6.0	---	---
573*: Yody-----	C	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
Shabliss-----	D	None-----	---	---	>6.0	---	---
575*: Yody-----	C	None-----	---	---	>6.0	---	---
Broyles-----	B	None-----	---	---	>6.0	---	---
578----- Yody	C	None-----	---	---	>6.0	---	---
580*: Uwell-----	C	None-----	---	---	>6.0	---	---
Kelk-----	C	None-----	---	---	>6.0	---	---
590*: Raph-----	B	Rare-----	---	---	>6.0	---	---
Katelana-----	B	None-----	---	---	>6.0	---	---
Zimwala-----	C	None-----	---	---	>6.0	---	---
602*: Blimo-----	C	None-----	---	---	>6.0	---	---
Nyak-----	B	Rare-----	---	---	>6.0	---	---
Raph-----	B	Rare-----	---	---	>6.0	---	---
603*: Blimo-----	C	None-----	---	---	>6.0	---	---
Uwell-----	C	None-----	---	---	>6.0	---	---
605*: Blimo-----	C	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
Tosser-----	B	None-----	---	---	>6.0	---	---
610*: Broyles-----	B	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
Unsel-----	B	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
620*: Unsel-----	B	None-----	---	---	>6.0	---	---
Broyles-----	B	None-----	---	---	>6.0	---	---
621*: Nyala-----	B	None-----	---	---	>6.0	---	---
Breko-----	B	None-----	---	---	>6.0	---	---
Unsel-----	B	None-----	---	---	>6.0	---	---
630*: Molion-----	D	None-----	---	---	>6.0	---	---
Haarvar-----	D	None-----	---	---	>6.0	---	---
Haarvar-----	D	None-----	---	---	>6.0	---	---
631*, 632*: Roden-----	D	None-----	---	---	>6.0	---	---
Haarvar-----	D	None-----	---	---	>6.0	---	---
633*: Roden-----	D	None-----	---	---	>6.0	---	---
Izar-----	D	None-----	---	---	>6.0	---	---
Roden-----	D	None-----	---	---	>6.0	---	---
640*: Uwell-----	C	None-----	---	---	>6.0	---	---
Katelana-----	B	None-----	---	---	>6.0	---	---
642*: Kunzler-----	B	None-----	---	---	>6.0	---	---
Lincoyer-----	B	None-----	---	---	>6.0	---	---
643*: Kunzler-----	B	None-----	---	---	>6.0	---	---
Bylo-----	B	None-----	---	---	>6.0	---	---
Zimwala-----	C	None-----	---	---	>6.0	---	---
645*: Kunzler-----	B	None-----	---	---	>6.0	---	---
Blimo-----	C	None-----	---	---	>6.0	---	---
Uwell-----	C	None-----	---	---	>6.0	---	---
650*: Eaglepass-----	D	None-----	---	---	>6.0	---	---
Kyler-----	D	None-----	---	---	>6.0	---	---
Rock outcrop.							

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
660*: Stewval-----	D	None-----	---	---	>6.0	---	---
Rock outcrop.							
670*: Cavehill-----	C	None-----	---	---	>6.0	---	---
Grink-----	D	None-----	---	---	>6.0	---	---
Rock outcrop.							
680*: Genaw-----	D	None-----	---	---	>6.0	---	---
Puett-----	D	None-----	---	---	>6.0	---	---
Abgese-----	B	None-----	---	---	>6.0	---	---
690*: Devilsgait-----	C	Rare-----	---	---	4.0-6.0	Apparent	Feb-Jul
Cassiro-----	C	None-----	---	---	>6.0	---	---
710----- Raph	B	Rare-----	---	---	>6.0	---	---
730*: Zimwala-----	C	None-----	---	---	>6.0	---	---
Uwell-----	C	None-----	---	---	>6.0	---	---
Zimwala-----	C	None-----	---	---	>6.0	---	---
731*: Zimwala-----	C	None-----	---	---	>6.0	---	---
Uwell-----	C	None-----	---	---	>6.0	---	---
740*: Orupa-----	B	None-----	---	---	>6.0	---	---
Uwell-----	C	None-----	---	---	>6.0	---	---
741*: Orupa-----	B	None-----	---	---	>6.0	---	---
Orupa-----	B	None-----	---	---	>6.0	---	---
750*: Upatad-----	D	None-----	---	---	>6.0	---	---
Upatad-----	D	None-----	---	---	>6.0	---	---
Atlow-----	D	None-----	---	---	>6.0	---	---
751*: Upatad-----	D	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
752*:							
Upatad-----	D	None-----	---	---	>6.0	---	---
Atlow-----	D	None-----	---	---	>6.0	---	---
Pioche-----	D	None-----	---	---	>6.0	---	---
753*:							
Upatad-----	D	None-----	---	---	>6.0	---	---
Cropper-----	D	None-----	---	---	>6.0	---	---
Atlow-----	D	None-----	---	---	>6.0	---	---
760*:							
Segura-----	D	None-----	---	---	>6.0	---	---
Upatad-----	D	None-----	---	---	>6.0	---	---
Cropper-----	D	None-----	---	---	>6.0	---	---
762*:							
Segura-----	D	None-----	---	---	>6.0	---	---
Eoj-----	D	None-----	---	---	>6.0	---	---
Cassiro-----	C	None-----	---	---	>6.0	---	---
763*:							
Segura-----	D	None-----	---	---	>6.0	---	---
Pioche-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
770*:							
Cropper-----	D	None-----	---	---	>6.0	---	---
Birchcreek-----	C	None-----	---	---	>6.0	---	---
Segura-----	D	None-----	---	---	>6.0	---	---
774*:							
Cropper-----	D	None-----	---	---	>6.0	---	---
Cropper-----	D	None-----	---	---	>6.0	---	---
Rubble land-----	A	None-----	---	---	>6.0	---	---
780*:							
Bobs-----	D	None-----	---	---	>6.0	---	---
Orr-----	B	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
783-----	D	None-----	---	---	>6.0	---	---
Bobs							
790*:							
Bylo-----	B	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
790*: Tulase-----	B	None-----	---	---	>6.0	---	---
793----- Bylo	B	None-----	---	---	>6.0	---	---
800*: Broland-----	D	None-----	---	---	>6.0	---	---
Broland-----	D	None-----	---	---	>6.0	---	---
801----- Broland	D	None-----	---	---	>6.0	---	---
802*: Broland-----	D	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
803*: Broland-----	D	None-----	---	---	>6.0	---	---
Broyles-----	B	None-----	---	---	>6.0	---	---
810*: Yody-----	C	None-----	---	---	>6.0	---	---
Fax-----	C	None-----	---	---	>6.0	---	---
822*: Pits.							
Dumps-----	A	None-----	---	---	>6.0	---	---
823*----- Dumps	A	None-----	---	---	>6.0	---	---
830*: Genaw-----	D	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
842*: Orr-----	B	None-----	---	---	>6.0	---	---
Fax-----	C	None-----	---	---	>6.0	---	---
850*: Onkeyo-----	D	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
Adobe-----	D	None-----	---	---	>6.0	---	---
851*: Grink-----	D	None-----	---	---	>6.0	---	---
Onkeyo-----	D	None-----	---	---	>6.0	---	---
Xine-----	C	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
852*: Grink-----	D	None-----	---	---	>6.0	---	---
Onkeyo-----	D	None-----	---	---	>6.0	---	---
Halacan-----	D	None-----	---	---	>6.0	---	---
870*: Amelar-----	B	None-----	---	---	>6.0	---	---
Eoj-----	D	None-----	---	---	>6.0	---	---
Amelar-----	B	None-----	---	---	>6.0	---	---
871*: Amelar-----	B	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
874*: Amelar-----	B	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
875*: Amelar-----	B	None-----	---	---	>6.0	---	---
Eoj-----	D	None-----	---	---	>6.0	---	---
Hardol-----	B	None-----	---	---	>6.0	---	---
876*: Amelar-----	B	None-----	---	---	>6.0	---	---
Xine-----	C	None-----	---	---	>6.0	---	---
Halacan-----	D	None-----	---	---	>6.0	---	---
880*: Wredah-----	B	None-----	---	---	>6.0	---	---
Amelar-----	B	None-----	---	---	>6.0	---	---
Orr-----	B	None-----	---	---	>6.0	---	---
900*: Abgese-----	B	None-----	---	---	>6.0	---	---
Roden-----	D	None-----	---	---	>6.0	---	---
Orr-----	B	None-----	---	---	>6.0	---	---
902*: Abgese-----	B	None-----	---	---	>6.0	---	---
Risley-----	D	None-----	---	---	>6.0	---	---
Roden-----	D	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
911*: Devilsgait-----	C	Occasional-----	Brief to long	Mar-Jun	4.0-6.0	Apparent	Feb-Jul
Duffer-----	C	Rare-----	---	---	3.0-5.0	Apparent	Feb-Jun
Kunzler-----	B	None-----	---	---	>6.0	---	---
913----- Devilsgait	C	Occasional-----	Brief to long	Mar-Jun	4.0-6.0	Apparent	Feb-Jul
920*: Abgese-----	B	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
Shabliss-----	D	None-----	---	---	>6.0	---	---
930----- Tosser	B	None-----	---	---	>6.0	---	---
940*: Nyak-----	B	Rare-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
951*: Nyak-----	B	Rare-----	---	---	>6.0	---	---
Uwell-----	C	None-----	---	---	>6.0	---	---
Pern-----	B	Rare-----	---	---	>6.0	---	---
960*: Doten-----	D	None-----	---	---	5.0-6.0	Apparent	Feb-May
Bylo-----	B	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
970*: Doten-----	D	None-----	---	---	5.0-6.0	Apparent	Feb-May
Doten-----	D	None-----	---	---	5.0-6.0	Apparent	Feb-May
981*: Breko-----	B	None-----	---	---	>6.0	---	---
Armespan-----	B	None-----	---	---	>6.0	---	---
982*: Breko-----	B	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
990*: Blimo-----	C	None-----	---	---	>6.0	---	---
Kunzler-----	B	None-----	---	---	>6.0	---	---
Pern-----	B	Rare-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
991*: Blimo-----	C	None-----	---	---	>6.0	---	---
Zerk-----	B	None-----	---	---	>6.0	---	---
992*: Blimo-----	C	None-----	---	---	>6.0	---	---
Linoyer-----	B	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
1000*: Linoyer-----	B	None-----	---	---	>6.0	---	---
Unsel-----	B	None-----	---	---	>6.0	---	---
1010*: Hunnton-----	C	None-----	---	---	>6.0	---	---
Chiara-----	D	None-----	---	---	>6.0	---	---
1012*: Hunnton-----	C	None-----	---	---	>6.0	---	---
Wieland-----	C	None-----	---	---	>6.0	---	---
Kelk-----	C	None-----	---	---	>6.0	---	---
1020*: Sonoma-----	B	None-----	---	---	>6.0	---	---
Kelk-----	C	Rare-----	---	---	>6.0	---	---
1030----- Chiara	D	None-----	---	---	>6.0	---	---
1032*: Chiara-----	D	None-----	---	---	>6.0	---	---
Kelk-----	C	None-----	---	---	>6.0	---	---
Kelk-----	C	Rare-----	---	---	>6.0	---	---
1050*: Yody-----	C	None-----	---	---	>6.0	---	---
Dewar-----	D	None-----	---	---	>6.0	---	---
1081*: Bobs-----	D	None-----	---	---	>6.0	---	---
Fax-----	C	None-----	---	---	>6.0	---	---
Parisa-----	C	None-----	---	---	>6.0	---	---
1090*: Fax-----	C	None-----	---	---	>6.0	---	---
Hunnton-----	C	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
1090*: Cassiro-----	C	None-----	---	---	>6.0	---	---
1120*: Kunzler-----	B	None-----	---	---	>6.0	---	---
Sycomat-----	B	None-----	---	---	>6.0	---	---
1122*: Kunzler-----	B	None-----	---	---	>6.0	---	---
Pern-----	B	Rare-----	---	---	>6.0	---	---
1130*: Duffer-----	C	Occasional-----	Very brief----	Jan-Jun	1.5-3.0	Apparent	Jan-Jun
Duffer-----	C	Rare-----	---	---	3.0-5.0	Apparent	Feb-Jun
Equis-----	D	Rare-----	---	---	1.0-3.0	Apparent	Feb-Apr
1131*: Duffer-----	C	Occasional-----	Very brief----	Jan-Jun	1.5-3.0	Apparent	Jan-Jun
Devilsgait-----	D	Frequent-----	Long-----	Mar-Jun	0-1.5	Apparent	Feb-Jul
Duffer-----	C	Rare-----	---	---	3.0-5.0	Apparent	Feb-Jun
1132----- Duffer	C	Rare-----	---	---	3.0-5.0	Apparent	Feb-Jun
1141*: Shabliss-----	D	None-----	---	---	>6.0	---	---
Pyrat-----	B	None-----	---	---	>6.0	---	---
1151*: Zimbob-----	D	None-----	---	---	>6.0	---	---
Zimbob-----	D	None-----	---	---	>6.0	---	---
Rock outcrop.							
1152*: Zimbob-----	D	None-----	---	---	>6.0	---	---
Zimbob-----	D	None-----	---	---	>6.0	---	---
Eaglepass-----	D	None-----	---	---	>6.0	---	---
1171*: Haunchee-----	D	None-----	---	---	>6.0	---	---
Hardol-----	B	None-----	---	---	>6.0	---	---
Halacan-----	D	None-----	---	---	>6.0	---	---
1173*: Haunchee-----	D	None-----	---	---	>6.0	---	---
Hardol-----	B	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
1173*: Rock outcrop.							
1174*: Haunchee-----	D	None-----	---	---	>6.0	---	---
Wardbay-----	B	None-----	---	---	>6.0	---	---
Hardzem-----	C	None-----	---	---	>6.0	---	---
1175*: Haunchee-----	D	None-----	---	---	>6.0	---	---
Hardol-----	B	None-----	---	---	>6.0	---	---
Hardzem-----	C	None-----	---	---	>6.0	---	---
1176*: Haunchee-----	D	None-----	---	---	>6.0	---	---
Hardzem-----	C	None-----	---	---	>6.0	---	---
Rock outcrop.							
1178*: Haunchee-----	D	None-----	---	---	>6.0	---	---
Hardol-----	B	None-----	---	---	>6.0	---	---
Xine-----	C	None-----	---	---	>6.0	---	---
1180*: Eoj-----	D	None-----	---	---	>6.0	---	---
Eoj-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
1190*: Katelana-----	B	None-----	---	---	>6.0	---	---
Boofuss-----	D	Rare-----	---	---	0 to +2.5	Apparent	Jan-Jul
1201*: Biken-----	D	None-----	---	---	>6.0	---	---
Orr-----	B	None-----	---	---	>6.0	---	---
1202*: Biken-----	D	None-----	---	---	>6.0	---	---
Biken-----	D	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
1221*: Cavehill-----	C	None-----	---	---	>6.0	---	---
Grink-----	D	None-----	---	---	>6.0	---	---
Onkeyo-----	D	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
1222*: Grink-----	D	None-----	---	---	>6.0	---	---
Amelar-----	B	None-----	---	---	>6.0	---	---
Xine-----	C	None-----	---	---	>6.0	---	---
1230*: Garfan-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
Hutchley-----	D	None-----	---	---	>6.0	---	---
1240*: Biken-----	D	None-----	---	---	>6.0	---	---
Biken-----	D	None-----	---	---	>6.0	---	---
Biken-----	D	None-----	---	---	>6.0	---	---
1242*: Biken-----	D	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
Barfan-----	D	None-----	---	---	>6.0	---	---
1243*: Biken-----	D	None-----	---	---	>6.0	---	---
Breko-----	B	None-----	---	---	>6.0	---	---
1245*: Biken-----	D	None-----	---	---	>6.0	---	---
Biken-----	D	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
1251*: Alley-----	B	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
Cowgil-----	B	None-----	---	---	>6.0	---	---
1260*: Urmafot-----	D	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
1270*: Boofuss-----	D	Rare-----	---	---	0 to +2.5	Apparent	Jan-Jul
Boofuss-----	D	Rare-----	---	---	0 to +2.5	Apparent	Jan-Jul
Equis-----	D	Rare-----	---	---	1.0-3.0	Apparent	Feb-Apr
1280*: Palinor-----	D	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
1280*: Mollon-----	D	None-----	---	---	>6.0	---	---
Broland-----	D	None-----	---	---	>6.0	---	---
1282*: Urmafot-----	D	None-----	---	---	>6.0	---	---
Urmafot-----	D	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
1283*: Urmafot-----	D	None-----	---	---	>6.0	---	---
Fax-----	C	None-----	---	---	>6.0	---	---
1287*: Palinor-----	D	None-----	---	---	>6.0	---	---
Izar-----	D	None-----	---	---	>6.0	---	---
Biken-----	D	None-----	---	---	>6.0	---	---
1288*: Urmafot-----	D	None-----	---	---	>6.0	---	---
Cavehill-----	C	None-----	---	---	>6.0	---	---
Pookaloo-----	C	None-----	---	---	>6.0	---	---
1291*: Maderbak-----	C	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
1300*: Barfan-----	D	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
1310*: Kunzler-----	B	None-----	---	---	>6.0	---	---
Duffer-----	C	Rare-----	---	---	3.0-5.0	Apparent	Feb-Jun
Kunzler-----	B	None-----	---	---	>6.0	---	---
1321----- Sycomat	B	None-----	---	---	>6.0	---	---
1330*: Yody-----	C	None-----	---	---	>6.0	---	---
Dewar-----	D	None-----	---	---	>6.0	---	---
1340*: Pyrat-----	B	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
1351*:							
Hyzen-----	D	None-----	---	---	>6.0	---	---
Kyler-----	D	None-----	---	---	>6.0	---	---
Rock outcrop.							
1360*:							
Eganroc-----	C	None-----	---	---	>6.0	---	---
Hyzen-----	D	None-----	---	---	>6.0	---	---
Hardzem-----	C	None-----	---	---	>6.0	---	---
1370*:							
Wardbay-----	B	None-----	---	---	>6.0	---	---
Haunchee-----	D	None-----	---	---	>6.0	---	---
Hardol-----	B	None-----	---	---	>6.0	---	---
1372*:							
Wardbay-----	B	None-----	---	---	>6.0	---	---
Hardol-----	B	None-----	---	---	>6.0	---	---
Adobe-----	D	None-----	---	---	>6.0	---	---
1374*:							
Wardbay-----	B	None-----	---	---	>6.0	---	---
Adobe-----	D	None-----	---	---	>6.0	---	---
Haunchee-----	D	None-----	---	---	>6.0	---	---
1380*:							
Cavehill-----	C	None-----	---	---	>6.0	---	---
Hardol-----	B	None-----	---	---	>6.0	---	---
Eganroc-----	C	None-----	---	---	>6.0	---	---
1383*:							
Cavehill-----	C	None-----	---	---	>6.0	---	---
Cavehill-----	C	None-----	---	---	>6.0	---	---
Rock outcrop.							
1384*:							
Cavehill-----	C	None-----	---	---	>6.0	---	---
Haunchee-----	D	None-----	---	---	>6.0	---	---
Cavehill-----	C	None-----	---	---	>6.0	---	---
1385*:							
Cavehill-----	C	None-----	---	---	>6.0	---	---
Hyzen-----	D	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth Ft	Kind	Months
1385*: Xine-----	C	None-----	---	---	>6.0	---	---
1390*: Chen-----	D	None-----	---	---	>6.0	---	---
Segura-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
1391*: Chen-----	D	None-----	---	---	>6.0	---	---
Tusel-----	B	None-----	---	---	>6.0	---	---
1392*: Chen-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
Birchcreek-----	C	None-----	---	---	>6.0	---	---
1400*: Suak-----	C	None-----	---	---	>6.0	---	---
Segura-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
1430*: Hardzem-----	C	None-----	---	---	>6.0	---	---
Haunchee-----	D	None-----	---	---	>6.0	---	---
Wardbay-----	B	None-----	---	---	>6.0	---	---
1431*: Hardzem-----	C	None-----	---	---	>6.0	---	---
Hackwood-----	B	None-----	---	---	>6.0	---	---
Guiser-----	B	None-----	---	---	>6.0	---	---
1451*: Birchcreek-----	C	None-----	---	---	>6.0	---	---
Segura-----	D	None-----	---	---	>6.0	---	---
Chen-----	D	None-----	---	---	>6.0	---	---
1460-----	B	None-----	---	---	>6.0	---	---
Unsel							
1480*: Amelar-----	B	None-----	---	---	>6.0	---	---
Bobs-----	D	None-----	---	---	>6.0	---	---
1491*: Pyrat-----	B	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
1491*: Palinor-----	D	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
1492*: Pyrat-----	B	None-----	---	---	>6.0	---	---
Shabliss-----	D	None-----	---	---	>6.0	---	---
Linoyer-----	B	None-----	---	---	>6.0	---	---
1493*: Pyrat-----	B	None-----	---	---	>6.0	---	---
Parisa-----	C	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
1494*: Pyrat-----	B	None-----	---	---	>6.0	---	---
McConnel-----	B	None-----	---	---	>6.0	---	---
1510*: Raph-----	B	Rare-----	---	---	>6.0	---	---
Zimwala-----	C	None-----	---	---	>6.0	---	---
Heist-----	B	None-----	---	---	>6.0	---	---
1511*: Hessing-----	B	None-----	---	---	>6.0	---	---
Uwell-----	C	None-----	---	---	>6.0	---	---
Zimwala-----	C	None-----	---	---	>6.0	---	---
1520*: Fax-----	C	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
Broland-----	D	None-----	---	---	>6.0	---	---
1550*: Haunchee-----	D	None-----	---	---	>6.0	---	---
Muiral-----	C	None-----	---	---	>6.0	---	---
Wardbay-----	B	None-----	---	---	>6.0	---	---
1560*: Adobe-----	D	None-----	---	---	>6.0	---	---
Haunchee-----	D	None-----	---	---	>6.0	---	---
Hardzem-----	C	None-----	---	---	>6.0	---	---
1570*: Nyala-----	B	None-----	---	---	>6.0	---	---

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
1570*: Broyles-----	B	None-----	---	---	>6.0	---	---
1580*: Wredah-----	B	None-----	---	---	>6.0	---	---
Selti-----	B	None-----	---	---	>6.0	---	---
Tulase-----	B	None-----	---	---	>6.0	---	---
1610*: Sheffit-----	D	None-----	---	---	5.0-6.0	Apparent	Jan-May
Blimo-----	C	None-----	---	---	>6.0	---	---
1700*: Garfan-----	D	None-----	---	---	>6.0	---	---
Garfan-----	D	None-----	---	---	>6.0	---	---
McIvey-----	C	None-----	---	---	>6.0	---	---
1800*: Pookaloo-----	C	None-----	---	---	>6.0	---	---
Onkeyo-----	D	None-----	---	---	>6.0	---	---
Cavehill-----	C	None-----	---	---	>6.0	---	---
1810*: Ilton-----	C	None-----	---	---	>6.0	---	---
Yody-----	C	None-----	---	---	>6.0	---	---
Blimo-----	C	None-----	---	---	>6.0	---	---
1820*: Sodhouse-----	D	None-----	---	---	>6.0	---	---
Sodhouse-----	D	None-----	---	---	>6.0	---	---
1821*: Sodhouse-----	D	None-----	---	---	>6.0	---	---
Palinor-----	D	None-----	---	---	>6.0	---	---
1830*: Armespan-----	B	None-----	---	---	>6.0	---	---
Cliffdown-----	B	None-----	---	---	>6.0	---	---
Candelaria-----	B	None-----	---	---	>6.0	---	---
1850*: Clan Alpine-----	C	None-----	---	---	>6.0	---	---
Rubble land-----	A	None-----	---	---	>6.0	---	---
Rock outcrop.							

See footnote at end of table.

TABLE 10.--WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table		
		Frequency	Duration	Months	Depth	Kind	Months
					<u>Ft</u>		
1860*: Hackwood-----	B	None-----	---	---	>6.0	---	---
Chen-----	D	None-----	---	---	>6.0	---	---
Tusel-----	B	None-----	---	---	>6.0	---	---

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 11.--SOIL FEATURES

(The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
100*:							
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Rock outcrop.							
104*:							
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Zimbob-----	10-14	Hard	---	---	Moderate-----	High-----	Low.
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
108*:							
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Tecomar-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Rock outcrop.							
109*:							
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
110*:							
Zimbob-----	10-14	Hard	---	---	Moderate-----	High-----	Low.
Zimbob-----	10-14	Hard	---	---	Moderate-----	High-----	Low.
111*:							
Zimbob-----	4-10	Hard	---	---	Moderate-----	High-----	Low.
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Rock outcrop.							
113*:							
Zimbob-----	10-14	Hard	---	---	Moderate-----	High-----	Low.
Zimbob-----	4-10	Hard	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
119*:							
Zimbob-----	10-14	Hard	---	---	Moderate-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
120*:							
Tecomar-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
120*: Zimbob-----	10-14	Hard	---	---	Moderate-----	High-----	Low.
124*: Tecomar-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Tecomar-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
126*: Tecomar-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Xine-----	20-40	Soft	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
160*: Zerk-----	>60	---	---	---	Low-----	High-----	Low.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
Tosser-----	>60	---	---	---	Low-----	High-----	Moderate.
162*: Broyles-----	>60	---	---	---	Low-----	High-----	Moderate.
Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
166*: Tosser-----	>60	---	---	---	Low-----	High-----	Moderate.
Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
Linoyer-----	>60	---	---	---	Low-----	High-----	Moderate.
170*: Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
Hessing-----	>60	---	---	---	Low-----	High-----	High.
Zerk-----	>60	---	---	---	Low-----	High-----	Low.
173*: Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
174*: Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
179*: Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
Pern-----	>60	---	---	---	High-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
181*:							
Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
Cowgil-----	>60	---	---	---	Moderate-----	High-----	Low.
Broyles-----	>60	---	---	---	Low-----	High-----	Moderate.
185*:							
Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
189*:							
Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
Linoyer-----	>60	---	---	---	Low-----	High-----	Moderate.
190*:							
Cowgil-----	>60	---	---	---	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Fax-----	>60	---	20-36	Thick	Moderate-----	High-----	Low.
192*:							
Cowgil-----	>60	---	---	---	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
201*:							
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Tecomar-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
205*:							
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Hardzem-----	20-40	Soft	---	---	Moderate-----	Moderate-----	Low.
Rock outcrop.							
220*:							
Hutchley-----	10-20	Hard	---	---	Moderate-----	Moderate-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Suak-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
223*:							
Hutchley-----	10-20	Hard	---	---	Moderate-----	Moderate-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
224*:							
Hutchley-----	10-20	Hard	---	---	Moderate-----	Moderate-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
224*:							
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
226*:							
Hutchley-----	10-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Tusel-----	40-60	Hard	---	---	Moderate-----	Moderate-----	Low.
Suak-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
230*:							
Linoyer-----	>60	---	---	---	Low-----	High-----	Moderate.
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
231-----	>60	---	---	---	Low-----	High-----	Moderate.
Linoyer							
232*:							
Linoyer-----	>60	---	---	---	Low-----	High-----	Moderate.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
233-----	>60	---	---	---	Moderate-----	High-----	Low.
Linoyer							
241*:							
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
Raph-----	>60	---	---	---	Moderate-----	High-----	Moderate.
242*:							
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
243*:							
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
Nyak-----	>60	---	---	---	Moderate-----	High-----	High.
244*:							
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
Raph-----	>60	---	---	---	Moderate-----	High-----	Moderate.
246*:							
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
250*:							
Sheffit-----	>60	---	---	---	Moderate-----	High-----	High.
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
252*: Sheffit-----	>60	---	---	---	Moderate-----	High-----	High.
Equis-----	>60	---	---	---	Moderate-----	High-----	High.
Equis-----	>60	---	---	---	Moderate-----	High-----	High.
253*: Sheffit-----	>60	---	---	---	High-----	High-----	High.
Sheffit-----	>60	---	---	---	Moderate-----	High-----	High.
Zorravista-----	>60	---	---	---	Low-----	High-----	High.
254*: Sheffit-----	>60	---	---	---	Moderate-----	High-----	High.
Boofuss-----	>60	---	---	---	High-----	High-----	High.
255*: Sheffit-----	>60	---	---	---	Moderate-----	High-----	High.
Sheffit-----	>60	---	---	---	Moderate-----	High-----	High.
Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
262----- Equis	>60	---	---	---	Moderate-----	High-----	High.
266*: Equis-----	>60	---	---	---	Moderate-----	High-----	High.
Equis-----	>60	---	---	---	Moderate-----	High-----	High.
Kolda-----	>60	---	---	---	High-----	High-----	High.
267*: Equis-----	>60	---	---	---	Moderate-----	High-----	High.
Devilsgait-----	>60	---	---	---	High-----	High-----	Low.
270*: Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Maderbak-----	20-40	Hard	---	---	Low-----	High-----	Moderate.
Rubble land-----	>40	Hard	---	---	---	---	---
271*: Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
275*: Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
276*:							
Stewval-----	4-14	Hard	---	---	Moderate-----	Moderate-----	Low.
Maderbak-----	20-40	Hard	---	---	Low-----	High-----	Moderate.
Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
279*:							
Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Broland-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
282-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Palinor							
283*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
286*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
287*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Wintermute-----	>60	---	---	---	Low-----	High-----	Low.
288*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Broland-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
290*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
291*:							
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Borvant-----	>60	---	10-20	Thick	Moderate-----	High-----	Moderate.
Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
292*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
295*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.
296*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
297*:							
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
Izar-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
300*:							
Playas-----	>60	---	---	---	---	High-----	High.
Orupa-----	>60	---	---	---	Moderate-----	High-----	High.
310*:							
Dune land-----	>60	---	---	---	---	---	---
Playas-----	>60	---	---	---	---	High-----	High.
321*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
322*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
323*:							
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Bobs-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
326*:							
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.
327*:							
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Cassiro-----	>60	---	---	---	Low-----	Moderate-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
327*: Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
328*: Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Tecomar-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
334*: Parisa-----	>60	---	20-40	Thick	Moderate-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
336----- Parisa	>60	---	20-40	Thick	Moderate-----	High-----	Low.
337*: Parisa-----	>60	---	20-40	Thick	Moderate-----	High-----	Low.
Wintermute-----	>60	---	---	---	Low-----	High-----	Low.
338*: Parisa-----	>60	---	20-40	Thick	Moderate-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
340*: Izar-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Izar-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
346*: Izar-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.
Zerk-----	>60	---	---	---	Low-----	High-----	Low.
351*: Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
353----- Heist	>60	---	---	---	Moderate-----	High-----	Low.
356*: Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
Wintermute-----	>60	---	---	---	Low-----	High-----	Low.
360*: Belmill-----	>60	---	---	---	Moderate-----	High-----	Low.
Belmill-----	>60	---	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
361*: Belmill-----	>60	---	---	---	Moderate-----	High-----	Low.
Cowgil-----	>60	---	---	---	Moderate-----	High-----	Low.
Selti-----	>60	---	---	---	Moderate-----	High-----	Low.
372----- Automal	>60	---	---	---	Moderate-----	High-----	Low.
373*: Automal-----	>60	---	---	---	Moderate-----	High-----	Low.
Wintermute-----	>60	---	---	---	Low-----	High-----	Low.
380*: Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Parisa-----	>60	---	20-40	Thick	Moderate-----	High-----	Low.
411*: Cassiro-----	>60	---	---	---	Low-----	Moderate-----	Low.
Cassiro-----	>60	---	---	---	Low-----	Moderate-----	Low.
413*: Cassiro-----	>60	---	---	---	Low-----	Moderate-----	Low.
Fax-----	>60	---	20-36	Thick	Moderate-----	High-----	Low.
Belmill-----	>60	---	---	---	Moderate-----	High-----	Low.
414*: Cassiro-----	>60	---	---	---	Low-----	Moderate-----	Low.
Belmill-----	>60	---	---	---	Moderate-----	High-----	Low.
421----- Wintermute	>60	---	---	---	Low-----	High-----	Low.
425*: Wintermute-----	>60	---	---	---	Low-----	High-----	Low.
Wintermute-----	>60	---	---	---	Low-----	High-----	Low.
434*: Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
436*: Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
437*: Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
437*: Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
440*: Hessing-----	>60	---	---	---	Low-----	High-----	High.
Zerk-----	>60	---	---	---	Low-----	High-----	Low.
450*: Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
455*: Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
Linoyer-----	>60	---	---	---	Low-----	High-----	Moderate.
458*: Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
471*: Hessing-----	>60	---	---	---	Low-----	High-----	High.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
472*: Broyles-----	>60	---	---	---	Low-----	High-----	Moderate.
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
473*: Broyles-----	>60	---	---	---	Low-----	High-----	Moderate.
Sheffit-----	>60	---	---	---	Moderate-----	High-----	High.
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
480*: Pioche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
481*: Pioche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
483*: Pioche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
483*: Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Birchcreek-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
484*: Pioche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.
Birchcreek-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
486*: Pioche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
489*: Pioche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Birchcreek-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
490----- Kunzler	>60	---	---	---	Moderate-----	High-----	Moderate.
491*: Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
500*: Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Hutchley-----	10-20	Hard	---	---	Moderate-----	Moderate-----	Low.
510*: Onkeyo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
520*: McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Pioche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.
531*: Duffer-----	>60	---	---	---	High-----	High-----	High.
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
534*: Duffer-----	>60	---	---	---	High-----	High-----	High.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
534*:							
Duffer-----	>60	---	---	---	High-----	High-----	High.
Kolda-----	>60	---	---	---	High-----	High-----	High.
540*:							
Kolda-----	>60	---	---	---	High-----	High-----	High.
Sheffit-----	>60	---	---	---	Moderate-----	High-----	High.
Equis-----	>60	---	---	---	Moderate-----	High-----	High.
541*:							
Kolda-----	>60	---	---	---	High-----	High-----	High.
Duffer-----	>60	---	---	---	High-----	High-----	High.
542*:							
Devilsgait-----	>60	---	---	---	High-----	High-----	Low.
Devilsgait-----	>60	---	---	---	High-----	High-----	Low.
Duffer-----	>60	---	---	---	High-----	High-----	High.
550*:							
Molion-----	>60	---	14-20	Thin	Moderate-----	High-----	Low.
Unsel-----	>60	---	---	---	Low-----	High-----	Low.
Breko-----	>60	---	---	---	Moderate-----	High-----	Low.
552-----	>60	---	14-20	Thin	Moderate-----	High-----	Low.
Molion							
561*:							
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Ploche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.
Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
564*:							
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Chen-----	12-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Suak-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
566*:							
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
567*:							
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Birchcreek-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
Hutchley-----	10-20	Hard	---	---	Moderate-----	Moderate-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
570*:							
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
McConnel-----	>60	---	---	---	Low-----	High-----	Moderate.
573*:							
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
575*:							
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Broyles-----	>60	---	---	---	Low-----	High-----	Moderate.
578-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Yody							
580*:							
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Kelk-----	>60	---	---	---	Moderate-----	High-----	Low.
590*:							
Raph-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
Zimwala-----	>60	---	---	---	Low-----	High-----	High.
602*:							
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
Nyak-----	>60	---	---	---	Moderate-----	High-----	High.
Raph-----	>60	---	---	---	Moderate-----	High-----	Moderate.
603*:							
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
605*:							
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
Tosser-----	>60	---	---	---	Low-----	High-----	Moderate.
610*:							
Broyles-----	>60	---	---	---	Low-----	High-----	Moderate.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
Unsel-----	>60	---	---	---	Low-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
620*:							
Unsel-----	>60	---	---	---	Low-----	High-----	Low.
Broyles-----	>60	---	---	---	Low-----	High-----	Moderate.
621*:							
Nyala-----	>60	---	---	---	Low-----	High-----	Low.
Breko-----	>60	---	---	---	Moderate-----	High-----	Low.
Unsel-----	>60	---	---	---	Low-----	High-----	Low.
630*:							
Molion-----	>60	---	14-20	Thin	Moderate-----	High-----	Low.
Haarvar-----	10-20	Soft	---	---	Low-----	High-----	High.
Haarvar-----	10-20	Soft	---	---	Low-----	High-----	High.
631*, 632*:							
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.
Haarvar-----	10-20	Soft	---	---	Low-----	High-----	High.
633*:							
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.
Izar-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.
640*:							
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
642*:							
Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Lincyer-----	>60	---	---	---	Low-----	High-----	Moderate.
643*:							
Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Bylo-----	>60	---	---	---	Moderate-----	High-----	Low.
Zimwala-----	>60	---	---	---	Low-----	High-----	High.
645*:							
Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
650*:							
Eaglepass-----	4-6	Hard	---	---	Moderate-----	High-----	Low.
Kyler-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Rock outcrop.							

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
660*: Stewval-----	4-14	Hard	---	---	Moderate-----	Moderate-----	Low.
Rock outcrop.							
670*: Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Grink-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Rock outcrop.							
680*: Genaw-----	14-20	Soft	---	---	Moderate-----	High-----	Low.
Puett-----	10-20	Soft	---	---	Moderate-----	High-----	Low.
Abgese-----	>60	---	---	---	Moderate-----	High-----	Low.
690*: Devilsgait-----	>60	---	---	---	High-----	High-----	Low.
Cassiro-----	>60	---	---	---	Low-----	Moderate-----	Low.
710-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Raph							
730*: Zimwala-----	>60	---	---	---	Low-----	High-----	High.
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Zimwala-----	>60	---	---	---	Low-----	High-----	High.
731*: Zimwala-----	>60	---	---	---	Low-----	High-----	High.
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
740*: Orupa-----	>60	---	---	---	Moderate-----	High-----	High.
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
741*: Orupa-----	>60	---	---	---	Moderate-----	High-----	High.
Orupa-----	>60	---	---	---	Moderate-----	High-----	High.
750*: Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
751*: Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
752*:							
Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Pioche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.
753*:							
Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Atlow-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
760*:							
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Upatad-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
762*:							
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Eoj-----	>60	---	---	---	Moderate-----	High-----	Low.
Cassiro-----	>60	---	---	---	Low-----	Moderate-----	Low.
763*:							
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Pioche-----	6-15	Hard	---	---	Low-----	Moderate-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
770*:							
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Birchcreek-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
774*:							
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Cropper-----	14-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Rubble land-----	>40	Hard	---	---	---	---	---
780*:							
Bobs-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Orr-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
783-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Bobs							
790*:							
Bylo-----	>60	---	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
790*: Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
793----- Bylo	>60	---	---	---	Moderate-----	High-----	Low.
800*: Broland-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Broland-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
801----- Broland	>60	---	14-20	Thick	Moderate-----	High-----	Low.
802*: Broland-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
803*: Broland-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Broyles-----	>60	---	---	---	Low-----	High-----	Moderate.
810*: Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Fax-----	>60	---	20-36	Thick	Moderate-----	High-----	Low.
822*: Pits.							
Dumps-----	>60	---	---	---	---	---	---
823*----- Dumps	>60	---	---	---	---	---	---
830*: Genaw-----	14-20	Soft	---	---	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
842*: Orr-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Fax-----	>60	---	20-36	Thick	Moderate-----	High-----	Low.
850*: Onkeyo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Adobe-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
851*: Grink-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Onkeyo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Xine-----	20-40	Soft	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	<u>In</u>		<u>In</u>				
852*: Grink-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Onkeyo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Halacan-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
870*: Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
Eoj-----	>60	---	---	---	Moderate-----	High-----	Low.
Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
871*: Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
874*: Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
875*: Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
Eoj-----	>60	---	---	---	Moderate-----	High-----	Low.
Hardol-----	>60	---	---	---	Moderate-----	High-----	Low.
876*: Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
Xine-----	20-40	Soft	---	---	Moderate-----	High-----	Low.
Halacan-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
880*: Wredah-----	>60	---	---	---	Moderate-----	High-----	Low.
Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
Orr-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
900*: Abgese-----	>60	---	---	---	Moderate-----	High-----	Low.
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.
Orr-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
902*: Abgese-----	>60	---	---	---	Moderate-----	High-----	Low.
Risley-----	20-40	Soft	---	---	Low-----	High-----	Moderate.
Roden-----	8-14	Soft	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
911*: Devilsgait-----	>60	---	---	---	High-----	High-----	Low.
Duffer-----	>60	---	---	---	High-----	High-----	High.
Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
913----- Devilsgait	>60	---	---	---	High-----	High-----	Low.
920*: Abgese-----	>60	---	---	---	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
930----- Tosser	>60	---	---	---	Low-----	High-----	Moderate.
940*: Nyak-----	>60	---	---	---	Moderate-----	High-----	High.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
951*: Nyak-----	>60	---	---	---	Moderate-----	High-----	High.
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Pern-----	>60	---	---	---	High-----	High-----	Low.
960*: Doten-----	>60	---	---	---	Low-----	High-----	High.
Bylo-----	>60	---	---	---	Moderate-----	High-----	Low.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
970*: Doten-----	>60	---	---	---	Low-----	High-----	High.
Doten-----	>60	---	---	---	Low-----	High-----	High.
981*: Breko-----	>60	---	---	---	Moderate-----	High-----	Low.
Armespan-----	>60	---	---	---	Moderate-----	High-----	Low.
982*: Breko-----	>60	---	---	---	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
990*: Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Pern-----	>60	---	---	---	High-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
991*:							
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
Zerk-----	>60	---	---	---	Low-----	High-----	Low.
992*:							
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
Linoyer-----	>60	---	---	---	Low-----	High-----	Moderate.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
1000*:							
Linoyer-----	>60	---	---	---	Low-----	High-----	Moderate.
Unsel-----	>60	---	---	---	Low-----	High-----	Low.
1010*:							
Hunnton-----	>60	---	20-40	Thick	Moderate-----	High-----	Low.
Chiara-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
1012*:							
Hunnton-----	>60	---	20-40	Thick	Moderate-----	High-----	Low.
Wieland-----	>60	---	---	---	Moderate-----	High-----	Low.
Kelk-----	>60	---	---	---	Moderate-----	High-----	Low.
1020*:							
Sonoma-----	>60	---	---	---	High-----	High-----	Low.
Kelk-----	>60	---	---	---	Moderate-----	High-----	Low.
1030-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Chiara							
1032*:							
Chiara-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Kelk-----	>60	---	---	---	Moderate-----	High-----	Low.
Kelk-----	>60	---	---	---	Moderate-----	High-----	Low.
1050*:							
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Dewar-----	>60	---	13-20	Thick	Moderate-----	High-----	Low.
1081*:							
Bobs-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Fax-----	>60	---	20-36	Thick	Moderate-----	High-----	Low.
Parisa-----	>60	---	20-40	Thick	Moderate-----	High-----	Low.
1090*:							
Fax-----	>60	---	20-36	Thick	Moderate-----	High-----	Low.
Hunnton-----	>60	---	20-40	Thick	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1090*: Cassiro-----	>60	---	---	---	Low-----	Moderate-----	Low.
1120*: Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Sycomat-----	>60	---	---	---	Low-----	High-----	Low.
1122*: Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Pern-----	>60	---	---	---	High-----	High-----	Low.
1130*: Duffer-----	>60	---	---	---	High-----	High-----	High.
Duffer-----	>60	---	---	---	High-----	High-----	High.
Equis-----	>60	---	---	---	Moderate-----	High-----	High.
1131*: Duffer-----	>60	---	---	---	High-----	High-----	High.
Devilsgait-----	>60	---	---	---	High-----	High-----	Low.
Duffer-----	>60	---	---	---	High-----	High-----	High.
1132----- Duffer	>60	---	---	---	High-----	High-----	High.
1141*: Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
1151*: Zimbob-----	10-14	Hard	---	---	Moderate-----	High-----	Low.
Zimbob-----	10-14	Hard	---	---	Moderate-----	High-----	Low.
Rock outcrop.							
1152*: Zimbob-----	10-14	Hard	---	---	Moderate-----	High-----	Low.
Zimbob-----	4-10	Hard	---	---	Moderate-----	High-----	Low.
Eaglepass-----	4-6	Hard	---	---	Moderate-----	High-----	Low.
1171*: Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Hardol-----	>60	---	---	---	Moderate-----	High-----	Low.
Halacan-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
1173*: Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Hardol-----	>60	---	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1173*: Rock outcrop.							
1174*: Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Wardbay-----	40-60	Hard	---	---	Moderate-----	High-----	Low.
Hardzem-----	20-40	Soft	---	---	Moderate-----	Moderate-----	Low.
1175*: Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Hardol-----	>60	---	---	---	Moderate-----	High-----	Low.
Hardzem-----	20-40	Soft	---	---	Moderate-----	Moderate-----	Low.
1176*: Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Hardzem-----	20-40	Soft	---	---	Moderate-----	Moderate-----	Low.
Rock outcrop.							
1178*: Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Hardol-----	>60	---	---	---	Moderate-----	High-----	Low.
Xine-----	20-40	Soft	---	---	Moderate-----	High-----	Low.
1180*: Eoj-----	>60	---	---	---	Moderate-----	High-----	Low.
Eoj-----	>60	---	---	---	Moderate-----	High-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
1190*: Katelana-----	>60	---	---	---	Moderate-----	High-----	High.
Boofuss-----	>60	---	---	---	High-----	High-----	High.
1201*: Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
Orr-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
1202*: Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
1221*: Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Grink-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Onkeyo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1222*: Grink-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
Xine-----	20-40	Soft	---	---	Moderate-----	High-----	Low.
1230*: Garfan-----	>60	---	---	---	Low-----	High-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Hutchley-----	10-20	Hard	---	---	Moderate-----	Moderate-----	Low.
1240*: Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
1242*: Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Barfan-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
1243*: Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
Breko-----	>60	---	---	---	Moderate-----	High-----	Low.
1245*: Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
1251*: Alley-----	>60	---	---	---	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Cowgil-----	>60	---	---	---	Moderate-----	High-----	Low.
1260*: Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
1270*: Boofuss-----	>60	---	---	---	High-----	High-----	High.
Boofuss-----	>60	---	---	---	High-----	High-----	High.
Equis-----	>60	---	---	---	Moderate-----	High-----	High.
1280*: Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1280*: Molion-----	>60	---	14-20	Thin	Moderate-----	High-----	Low.
Broland-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
1282*: Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
1283*: Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Fax-----	>60	---	20-36	Thick	Moderate-----	High-----	Low.
1287*: Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Izar-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Biken-----	14-20	Soft	---	---	Low-----	High-----	Low.
1288*: Urmafot-----	>60	---	9-20	Thick	Moderate-----	High-----	Low.
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
1291*: Maderbak-----	20-40	Hard	---	---	Low-----	High-----	Moderate.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
1300*: Barfan-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
1310*: Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Duffer-----	>60	---	---	---	High-----	High-----	High.
Kunzler-----	>60	---	---	---	Moderate-----	High-----	Moderate.
1321----- Sycomat	>60	---	---	---	Low-----	High-----	Low.
1330*: Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Dewar-----	>60	---	13-20	Thick	Moderate-----	High-----	Low.
1340*: Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1351*:							
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Kyler-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Rock outcrop.							
1360*:							
Eganroc-----	30-40	Hard	---	---	Moderate-----	High-----	Low.
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.
Hardzem-----	20-40	Soft	---	---	Moderate-----	Moderate-----	Low.
1370*:							
Wardbay-----	40-60	Hard	---	---	Moderate-----	High-----	Low.
Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Hardol-----	>60	---	---	---	Moderate-----	High-----	Low.
1372*:							
Wardbay-----	40-60	Hard	---	---	Moderate-----	High-----	Low.
Hardol-----	>60	---	---	---	Moderate-----	High-----	Low.
Adobe-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
1374*:							
Wardbay-----	40-60	Hard	---	---	Moderate-----	High-----	Low.
Adobe-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
1380*:							
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Hardol-----	>60	---	---	---	Moderate-----	High-----	Low.
Eganroc-----	30-40	Hard	---	---	Moderate-----	High-----	Low.
1383*:							
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Rock outcrop.							
1384*:							
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
1385*:							
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
Hyzen-----	6-14	Hard	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1385*: Xine-----	20-40	Soft	---	---	Moderate-----	High-----	Low.
1390*: Chen-----	12-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
1391*: Chen-----	12-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Tusel-----	40-60	Hard	---	---	Moderate-----	Moderate-----	Low.
1392*: Chen-----	12-20	Hard	---	---	Moderate-----	Moderate-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Birchcreek-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
1400*: Suak-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
1430*: Hardzem-----	20-40	Soft	---	---	Moderate-----	Moderate-----	Low.
Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Wardbay-----	40-60	Hard	---	---	Moderate-----	High-----	Low.
1431*: Hardzem-----	20-40	Soft	---	---	Moderate-----	Moderate-----	Low.
Hackwood-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Guiser-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
1451*: Birchcreek-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Low.
Segura-----	7-14	Hard	---	---	Moderate-----	High-----	Low.
Chen-----	12-20	Hard	---	---	Moderate-----	Moderate-----	Low.
1460----- Unsel	>60	---	---	---	Low-----	High-----	Low.
1480*: Amelar-----	>60	---	---	---	Moderate-----	High-----	Low.
Bobs-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
1491*: Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1491*: Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
1492*: Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
Shabliss-----	>60	---	10-20	Thick	Moderate-----	High-----	Low.
Linoyer-----	>60	---	---	---	Low-----	High-----	Moderate.
1493*: Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
Parisa-----	>60	---	20-40	Thick	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
1494*: Pyrat-----	>60	---	---	---	Moderate-----	High-----	Low.
McConnel-----	>60	---	---	---	Low-----	High-----	Moderate.
1510*: Raph-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Zimwala-----	>60	---	---	---	Low-----	High-----	High.
Heist-----	>60	---	---	---	Moderate-----	High-----	Low.
1511*: Hessing-----	>60	---	---	---	Low-----	High-----	High.
Uwell-----	>60	---	---	---	Moderate-----	High-----	Moderate.
Zimwala-----	>60	---	---	---	Low-----	High-----	High.
1520*: Fax-----	>60	---	20-36	Thick	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Broland-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
1550*: Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Muiral-----	20-40	Hard	---	---	Moderate-----	Moderate-----	Moderate.
Wardbay-----	40-60	Hard	---	---	Moderate-----	High-----	Low.
1560*: Adobe-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Haunchee-----	10-20	Hard	---	---	Moderate-----	High-----	Low.
Hardzem-----	20-40	Soft	---	---	Moderate-----	Moderate-----	Low.
1570*: Nyala-----	>60	---	---	---	Low-----	High-----	Low.

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1570*: Broyles-----	>60	---	---	---	Low-----	High-----	Moderate.
1580*: Wredah-----	>60	---	---	---	Moderate-----	High-----	Low.
Selti-----	>60	---	---	---	Moderate-----	High-----	Low.
Tulase-----	>60	---	---	---	Moderate-----	High-----	Low.
1610*: Sheffit-----	>60	---	---	---	Moderate-----	High-----	High.
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
1700*: Garfan-----	>60	---	---	---	Low-----	High-----	Low.
Garfan-----	>60	---	---	---	Low-----	High-----	Low.
McIvey-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
1800*: Pookaloo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Onkeyo-----	14-20	Hard	---	---	Moderate-----	High-----	Low.
Cavehill-----	20-40	Hard	---	---	Moderate-----	High-----	Low.
1810*: Ilton-----	32-40	Soft	---	---	Moderate-----	High-----	Low.
Yody-----	>60	---	30-40	Thick	Moderate-----	High-----	Low.
Blimo-----	>60	---	---	---	Moderate-----	High-----	High.
1820*: Sodhouse-----	>60	---	14-20	Thick	Low-----	High-----	Low.
Sodhouse-----	>60	---	14-20	Thick	Low-----	High-----	Low.
1821*: Sodhouse-----	>60	---	14-20	Thick	Low-----	High-----	Low.
Palinor-----	>60	---	14-20	Thick	Moderate-----	High-----	Low.
1830*: Armespan-----	>60	---	---	---	Moderate-----	High-----	Low.
Cliffdown-----	>60	---	---	---	Low-----	High-----	High.
Candelaria-----	>60	---	---	---	Low-----	High-----	High.
1850*: Clanalpine-----	20-40	Soft	---	---	Moderate-----	Moderate-----	Low.
Rubble land-----	>40	Hard	---	---	---	---	---
Rock outcrop.							

See footnote at end of table.

TABLE 11.--SOIL FEATURES--Continued

Soil name and map symbol	Bedrock		Cemented pan		Potential frost action	Risk of corrosion	
	Depth	Thickness	Depth	Thickness		Uncoated steel	Concrete
	In		In				
1860*:							
Hackwood-----	>60	---	---	---	Moderate-----	Moderate-----	Low.
Chen-----	12-20	Hard	---	---	Moderate-----	Moderate-----	Low.
Tusel-----	40-60	Hard	---	---	Moderate-----	Moderate-----	Low.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 12.--CLASSIFICATION OF THE SOILS

(An asterisk in the first column indicates that the soil is a taxadjunct to the series. See text for a description of those characteristics of the soil that are outside the range of the series)

Soil name	Family or higher taxonomic class
Abgese-----	Fine-loamy, mixed, mesic Xerollic Haplargids
Adobe-----	Loamy-skeletal, carbonatic Lithic Cryoborolls
Alley-----	Fine-loamy, mixed, mesic Durixerollic Haplargids
Amelar-----	Loamy-skeletal, mixed, frigid Calcic Argixerolls
Armespan-----	Loamy-skeletal, mixed, mesic Durixerollic Calciorthids
Atlow-----	Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids
Automal-----	Loamy-skeletal, mixed, mesic Durixerollic Calciorthids
Barfan-----	Ashy, calcareous, mesic Lithic Xeric Torriorthents
Belmill-----	Loamy-skeletal, mixed, mesic Aridic Calcic Argixerolls
Biken-----	Loamy-skeletal, mixed, shallow Xerollic Calciorthids
Birchcreek-----	Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls
Blimo-----	Coarse-loamy, mixed (calcareous), mesic Durorthidic Xeric Torriorthents
*Bobs-----	Loamy, carbonatic, frigid, shallow Aridic Petrocalcic Palexerolls
Boofuss-----	Clayey over loamy, montmorillonitic (calcareous), mesic Typic Halaquepts
Borvant-----	Loamy-skeletal, carbonatic, mesic, shallow Aridic Petrocalcic Palexerolls
*Breko-----	Loamy-skeletal, mixed, mesic Xerollic Haplargids
Broland-----	Loamy-skeletal, mixed, mesic, shallow Haploxerollic Durargids
Broyles-----	Coarse-loamy, mixed, mesic Duric Camborthids
Bylo-----	Fine-silty, mixed, mesic Typic Camborthids
Candelaria-----	Sandy-skeletal, mixed, mesic Duric Calciorthids
Cassiro-----	Clayey-skeletal, montmorillonitic, mesic Aridic Argixerolls
Cavehill-----	Loamy-skeletal, carbonatic, frigid Typic Calcixerolls
Chen-----	Clayey-skeletal, montmorillonitic, frigid Lithic Argixerolls
Chiara-----	Loamy, mixed, mesic, shallow Xerollic Durorthids
Clanalpine-----	Loamy-skeletal, mixed, frigid Typic Argixerolls
Cliffdown-----	Loamy-skeletal, mixed (calcareous), mesic Typic Torriorthents
Cowgil-----	Loamy-skeletal, mixed, mesic Xerollic Haplargids
Cropper-----	Loamy-skeletal, mixed, frigid Lithic Argixerolls
Devilsgait-----	Fine-silty, mixed (calcareous), mesic Cumulic Haplaquolls
Dewar-----	Loamy, mixed, mesic, shallow Xerollic Durargids
Doten-----	Fine, montmorillonitic, mesic Entic Chromoxererts
Duffer-----	Fine-silty, carbonatic, mesic Aquic Calciorthids
Eaglepass-----	Loamy-skeletal, carbonatic, mesic Lithic Xeric Torriorthents
Eganroc-----	Loamy-skeletal, mixed Calcic Pachic Cryoborolls
Eoj-----	Fine, montmorillonitic, frigid Typic Palexerolls
Equis-----	Fine, carbonatic, mesic Typic Halaquepts
Fax-----	Loamy-skeletal, mixed, mesic Aridic Durixerolls
Garfan-----	Clayey-skeletal, montmorillonitic, frigid Xerollic Paleargids
Genaw-----	Loamy, mixed, mesic, shallow Xerollic Haplargids
Grink-----	Loamy-skeletal, mixed, frigid Lithic Haploxerolls
Guiser-----	Loamy-skeletal, mixed Mollic Cryoboralfs
Haarvar-----	Clayey, montmorillonitic (calcareous), mesic, shallow Xeric Torriorthents
Hackwood-----	Fine-loamy, mixed Pachic Cryoborolls
Halacan-----	Loamy-skeletal, carbonatic Cryic Lithic Rendolls
Hardol-----	Loamy-skeletal, carbonatic Calcic Pachic Cryoborolls
Hardzem-----	Loamy-skeletal, mixed Typic Cryoboralfs
Haunchee-----	Loamy-skeletal, carbonatic Cryic Lithic Rendolls
Heist-----	Coarse-loamy, mixed (calcareous), mesic Xeric Torriorthents
Hessing-----	Coarse-loamy, mixed, mesic Typic Camborthids
Hunnton-----	Fine, montmorillonitic, mesic Xerollic Durargids
Hutchley-----	Loamy-skeletal, mixed, frigid Lithic Argixerolls
Hyzen-----	Loamy-skeletal, carbonatic, frigid Lithic Haploxerolls
Ilton-----	Coarse-loamy, mixed, mesic Durixerollic Calciorthids
Izar-----	Loamy-skeletal, mixed (calcareous), mesic Lithic Xeric Torriorthents
Katelana-----	Fine-silty, carbonatic, mesic Typic Torriorthents
Kelk-----	Fine-silty, mixed, mesic Durixerollic Camborthids
Kolda-----	Fine, montmorillonitic (calcareous), mesic Typic Haplaquolls
Kunzler-----	Coarse-loamy, mixed, mesic Durixerollic Calciorthids
Kyler-----	Loamy-skeletal, carbonatic, mesic Lithic Xeric Torriorthents
Linoyer-----	Coarse-silty, mixed (calcareous), mesic Xeric Torriorthents

TABLE 12.--CLASSIFICATION OF THE SOILS--Continued

Soil name	Family or higher taxonomic class
Maderbak-----	Clayey-skeletal, montmorillonitic, mesic Xerollic Haplargids
*McConnel-----	Sandy-skeletal, mixed, mesic Xerollic Camborthids
McIvey-----	Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls
Molion-----	Loamy-skeletal, mixed, mesic, shallow Haploxerollic Durorthids
Muiral-----	Loamy-skeletal, mixed Typic Cryochrepts
Nyak-----	Coarse-loamy, mixed (calcareous), mesic Durorthidic Xeric Torriorthents
Nyala-----	Fine-loamy, mixed, mesic Duric Haplargids
Onkeyo-----	Loamy-skeletal, mixed, frigid Lithic Calcixerolls
Orr-----	Fine-loamy, mixed, mesic Aridic Argixerolls
Orupa-----	Fine, montmorillonitic (calcareous), mesic Xeric Torriorthents
Palinor-----	Loamy-skeletal, carbonatic, mesic, shallow Xerollic Durorthids
Parisa-----	Loamy-skeletal, carbonatic, mesic Xerollic Durorthids
Pern-----	Fine-silty, mixed, mesic Calciorthidic Haploxerolls
Pioche-----	Clayey-skeletal, montmorillonitic, mesic Lithic Argixerolls
Pookaloo-----	Loamy-skeletal, carbonatic, mesic Lithic Xerollic Calciorthids
Puett-----	Loamy, mixed (calcareous), mesic, shallow Xeric Torriorthents
Pyrat-----	Loamy-skeletal, mixed, mesic Durixerollic Calciorthids
Raph-----	Fine-loamy, mixed, mesic Typic Camborthids
Risley-----	Fine, montmorillonitic, mesic Xerollic Haplargids
Roden-----	Clayey-skeletal, montmorillonitic (calcareous), mesic, shallow Xeric Torriorthents
Segura-----	Loamy, mixed, frigid Lithic Argixerolls
Selti-----	Loamy-skeletal, mixed, mesic Aridic Calcic Argixerolls
Shabliss-----	Loamy, mixed, mesic, shallow Haploxerollic Durorthids
Sheffit-----	Fine, montmorillonitic (calcareous), mesic Xeric Torriorthents
Sodhouse-----	Loamy, mixed, mesic, shallow Typic Durorthids
Sonoma-----	Fine-silty, mixed (calcareous), mesic Aeris Fluvaquents
Stewval-----	Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids
Suak-----	Loamy-skeletal, mixed, frigid Typic Argixerolls
Sycomat-----	Coarse-loamy, mixed, mesic Duric Calciorthids
Tecomar-----	Loamy-skeletal, carbonatic, mesic Lithic Xerollic Calciorthids
Tosser-----	Sandy-skeletal, mixed, mesic Xerollic Calciorthids
Tulase-----	Coarse-silty, mixed (calcareous), mesic Durorthidic Xeric Torriorthents
Tusel-----	Loamy-skeletal, mixed Argic Pachic Cryoborolls
Unsel-----	Fine-loamy, mixed, mesic Duric Haplargids
Upatad-----	Loamy-skeletal, mixed, mesic Lithic Argixerolls
Urmafot-----	Loamy, mixed, mesic, shallow Orthidic Durixerolls
Uwell-----	Fine-silty, mixed (calcareous), mesic Durorthidic Xeric Torriorthents
Wardbay-----	Loamy-skeletal, carbonatic, frigid Pachic Calcixerolls
Wieland-----	Fine, montmorillonitic, mesic Durixerollic Haplargids
Wintermute-----	Loamy-skeletal, mixed, mesic Duric Calciorthids
Wredah-----	Fine-loamy, mixed, mesic Durargidic Argixerolls
Xine-----	Loamy-skeletal, mixed, frigid Aridic Calcixerolls
Yody-----	Fine-loamy, mixed, mesic Haploxerollic Durargids
Zerk-----	Sandy-skeletal, mixed, mesic Duric Calciorthids
Zimbo-----	Loamy-skeletal, carbonatic, mesic Lithic Xeric Torriorthents
Zimwala-----	Fine-silty, carbonatic, mesic Typic Torriorthents
Zorravista-----	Mixed, mesic Xeric Torripsamments

Rangeland Plants and Woodland Understory

100-Pookaloo-Cavehill-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pookaloo	Cavehill	Rock outcrop	1	2	3	4
Bluegrass	POA++	1-5	---	---	---	---	5-10	5-10
Indian ricegrass	ORHY	1-5	1-5	---	1-5	5-15	2-5	10-20
Bottlebrush squirreltail	SIHY	1-5	---	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	1-5	---	1-5	20-40	30-40	30-40
Thurber needlegrass	STTH2	1-5	1-5	---	1-5	---	---	---
Canby bluegrass	POCA	---	1-5	---	1-5	---	---	---
Basin wildrye	ELCI2	---	1-5	---	1-5	---	2-8	---
Needleandthread	STCO4	---	---	---	---	2-5	---	---
Muttongrass	POFE	---	---	---	---	2-5	---	---
Goldenweed	HAPLO2	---	---	---	---	2-5	---	---
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---	---
Black sagebrush	ARARN	1-5	---	---	---	25-35	---	---
Mountain big sagebrush	ARVA2	---	1-5	---	1-5	---	15-25	15-25
Winterfat	EULA5	---	---	---	---	2-5	---	---
Shadscale	ATCO	---	---	---	---	2-5	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	---	2-10	5-10
Snowberry	SYMPH	---	---	---	---	---	2-5	---
Utah serviceberry	AMUT	---	---	---	---	---	1-5	---
Utah juniper	JUOS	1-5	1-5	---	1-5	---	---	---
Singleleaf pinyon	PIMO	1-5	1-5	---	1-5	---	---	---

Range site number:	028BY060NV	028BY062NV	None	028BY062NV	028BY008NV	028BY088NV	028BY079NV
Potential production (lb/acre):							
Favorable years	500	700	---	700	600	1,100	700
Normal years	375	500	---	500	400	900	500
Unfavorable years	250	300	---	300	200	700	300

104-Pookaloo-Zimbob-Hyzen association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Pookaloo	Zimbob	Hyzen	1	2
Bluegrass	POA++	1-5	---	---	---	---
Indian ricegrass	ORHY	1-5	10-20	2-5	20-30	---
Bottlebrush squirreltail	SIHY	1-5	2-5	---	5-10	---
Bluebunch wheatgrass	AGSP	1-5	---	---	---	---
Thurber needlegrass	STTH2	1-5	---	---	---	---
Sandberg bluegrass	POSE	---	2-5	---	2-5	---
Needleandthread	STCO4	---	10-20	---	10-20	---
Scribner needlegrass	STSC2	---	---	2-10	---	---
Goldenweed	HAPLO2	---	---	5-10	---	---
Black sagebrush	ARARN	1-5	30-40	2-8	---	---
Shadscale	ATCO	---	2-5	---	---	---
Littleleaf mountainmahogany	CEIN7	---	---	60-70	---	---
Desert snowberry	SYLO	---	---	2-8	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---
Utah juniper	JUOS	1-5	---	1-3	---	---
Singleleaf pinyon	PIMO	1-5	---	---	---	---
Range site number:		028BY060NV	028BY016NV	028BY066NV	028BY010NV	None
Potential production (lb/acre):						
Favorable years		500	400	1,300	800	---
Normal years		375	250	1,000	600	---
Unfavorable years		250	100	800	400	---

108-Pookaloo-Tecomar-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Pookaloo	Tecomar	Rock outcrop	1	2	3
Bluegrass	POA++	1-5	---	---	---	5-10	2-8
Indian ricegrass	ORHY	1-5	5-15	---	2-5	10-20	2-5
Bottlebrush squirreltail	SIHY	1-5	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	20-40	---	---	30-40	5-10
Thurber needlegrass	STTH2	1-5	---	---	---	---	30-40
Needleandthread	STCO4	---	2-5	---	---	---	2-8
Muttongrass	POFE	---	2-5	---	---	---	---
Scribner needlegrass	STSC2	---	---	---	2-10	---	---
Goldenweed	HAPLO2	---	2-5	---	5-10	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	2-5
Arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5
Black sagebrush	ARARN	1-5	25-35	---	2-8	---	---
Winterfat	EULA5	---	2-5	---	---	---	---
Shadscale	ATCO	---	2-5	---	---	---	---
Littleleaf mountainmahogany	CEIN7	---	---	---	60-70	---	---
Desert snowberry	SYLO	---	---	---	2-8	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	5-10	2-10
Mountain big sagebrush	ARVA2	---	---	---	---	15-25	---
Big sagebrush	ARTR2	---	---	---	---	---	15-25
Utah juniper	JUOS	1-5	---	---	1-3	---	---
Singleleaf pinyon	PIMO	1-5	---	---	---	---	---

Range site number:	028BY060NV	028BY008NV	None	028BY066NV	028BY079NV	028BY007NV
Potential production (lb/acre):						
Favorable years	500	600	---	1,300	700	1,000
Normal years	375	400	---	1,000	500	800
Unfavorable years	250	200	---	800	300	600

109-Hyzen-Cavehill association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Hyzen	Cavehill	Hyzen, dry	1	2	3
Bluegrass	POA++	1-5	---	---	---	1-5	---
Indian ricegrass	ORHY	1-5	1-5	2-5	---	1-5	5-15
Bottlebrush squirreltail	SIHY	1-5	---	---	---	1-5	---
Bluebunch wheatgrass	AGSP	1-5	1-5	---	---	1-5	20-40
Thurber needlegrass	STTH2	1-5	1-5	---	---	1-5	---
Canby bluegrass	POCA	---	1-5	---	---	---	---
Basin wildrye	ELCI2	---	1-5	---	---	---	---
Scribner needlegrass	STSC2	---	---	2-10	---	---	---
Needleandthread	STCO4	---	---	---	---	---	2-5
Muttongrass	POFE	---	---	---	---	---	2-5
Goldenweed	HAPLO2	---	---	5-10	---	---	2-5
Tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5
Black sagebrush	ARARN	1-5	---	2-8	---	1-5	25-35
Mountain big sagebrush	ARVA2	---	1-5	---	---	---	---
Littleleaf mountainmahogany	CEIN7	---	---	60-70	---	---	---
Desert snowberry	SYLO	---	---	2-8	---	---	---
Winterfat	EULA5	---	---	---	---	---	2-5
Shadscale	ATCO	---	---	---	---	---	2-5
Utah juniper	JUOS	1-5	1-5	1-3	---	1-5	---
Singleleaf pinyon	PIMO	1-5	1-5	---	---	1-5	---

Range site number:	028BY060NV	028BY062NV	028BY066NV	None	028BY060NV	028BY008NV
Potential production (lb/acre):						
Favorable years	500	700	1,300	---	500	600
Normal years	375	500	1,000	---	375	400
Unfavorable years	250	300	800	---	250	200

110-Zimbob association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Zimbob, less sloping	Zimbob, steep	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---	---
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	5-10	1-5	---
Indian ricegrass	ORHY	10-20	10-20	15-25	20-30	1-5	---
Needleandthread	STCO4	10-20	10-20	---	10-20	---	---
Pine needlegrass	STPI2	---	---	2-5	---	---	---
Bluebunch wheatgrass	AGSP	---	---	2-5	---	1-5	---
Bluegrass	POA++	---	---	---	---	1-5	---
Thurber needlegrass	STTH2	---	---	---	---	1-5	---
Black sagebrush	ARARN	30-40	30-40	40-50	---	1-5	---
Shadscale	ATCO	2-5	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---
Utah juniper	JUOS	---	---	1-3	---	1-5	---
Singleleaf pinyon	PIMO	---	---	---	---	1-5	---

Range site number:	028BY016NV	028BY016NV	028BY059NV	028BY010NV	028BY060NV	None
Potential production (lb/acre):						
Favorable years	400	400	400	800	500	---
Normal years	250	250	350	600	375	---
Unfavorable years	100	100	125	400	250	---

111-Zimbob-Hyzen-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Zimbob	Hyzen	Rock outcrop	1	2	3
Pine needlegrass	STPI2	2-5	---	---	---	---	---
Indian ricegrass	ORHY	15-25	2-5	---	20-30	5-15	1-5
Bottlebrush squirreltail	SIHY	2-5	---	---	2-5	---	1-5
Sandberg bluegrass	POSE	2-5	---	---	2-5	---	---
Bluebunch wheatgrass	AGSP	2-5	---	---	---	20-40	1-5
Scribner needlegrass	STSC2	---	2-10	---	---	---	---
Needleandthread	STCO4	---	---	---	10-20	2-5	---
Muttongrass	POFE	---	---	---	---	2-5	---
Bluegrass	POA++	---	---	---	---	---	1-5
Thurber needlegrass	STTH2	---	---	---	---	---	1-5
Goldenweed	HAPLO2	---	5-10	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---	---
Black sagebrush	ARARN	40-50	2-8	---	---	25-35	1-5
Littleleaf mountainmahogany	CEIN7	---	60-70	---	---	---	---
Desert snowberry	SYLO	---	2-8	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Winterfat	EULA5	---	---	---	---	2-5	---
Shadscale	ATCO	---	---	---	---	2-5	---
Utah juniper	JUOS	1-3	1-3	---	---	---	1-5
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5

Range site number:	028BY059NV	028BY066NV	None	028BY080NV	028BY008NV	028BY060NV
Potential production (lb/acre):						
Favorable years	400	1,300	---	600	600	500
Normal years	350	1,000	---	400	400	375
Unfavorable years	125	800	---	200	200	250

113-Zimbob-Pookaloo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Zimbob, extremely gravelly	Zimbob, very gravelly	Pookaloo	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---	---
Bottlebrush squirreltail	SIHY	2-5	2-5	1-5	---	---	---	---
Indian ricegrass	ORHY	10-20	15-25	1-5	20-30	5-15	2-5	---
Needleandthread	STCO4	10-20	---	---	---	2-5	---	---
Pine needlegrass	STPI2	---	2-5	---	---	---	---	---
Bluebunch wheatgrass	AGSP	---	2-5	1-5	10-15	20-40	---	---
Bluegrass	POA++	---	---	1-5	2-8	---	---	---
Thurber needlegrass	STTH2	---	---	1-5	---	---	---	---
Muttongrass	POFE	---	---	---	---	2-5	---	---
Scribner needlegrass	STSC2	---	---	---	---	---	2-10	---
Goldenweed	HAPLO2	---	---	---	---	2-5	5-10	---
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---	---
Black sagebrush	ARARN	30-40	40-50	1-5	---	25-35	2-8	---
Shadscale	ATCO	2-5	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---	---
Big sagebrush	ARTR2	---	---	---	25-35	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	1-8	---	---	---
Winterfat	EULA5	---	---	---	---	2-5	---	---
Littleleaf mountainmahogany	CEIN7	---	---	---	---	---	60-70	---
Desert snowberry	SYLO	---	---	---	---	---	2-8	---
Utah juniper	JUOS	---	1-3	1-5	---	---	1-3	---
Singleleaf pinyon	PIMO	---	---	1-5	---	---	---	---

Range site number:	028BY016NV	028BY059NV	028BY060NV	028BY094NV	028BY008NV	028BY066NV	None
Potential production (lb/acre):							
Favorable years	400	400	500	800	600	1,300	---
Normal years	250	350	375	600	400	1,000	---
Unfavorable years	100	125	250	400	200	800	---

119-Zimbob-Palinor association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Zimbob	Palinor	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-10	---	2-5	---	---
Bottlebrush squirreltail	SIHY	2-5	2-5	1-5	5-10	1-5	---
Indian ricegrass	ORHY	10-20	15-25	1-5	20-30	1-5	5-15
Needleandthread	STCO4	10-20	5-15	1-5	10-20	---	2-5
Basin wildrye	ELCI2	---	---	1-5	---	---	---
Bluegrass	POA++	---	---	1-5	---	1-5	---
Bluebunch wheatgrass	AGSP	---	---	---	---	1-5	20-40
Thurber needlegrass	STTH2	---	---	---	---	1-5	---
Muttongrass	POFE	---	---	---	---	---	2-5
Thickstem cabbage	CACR11	---	---	1-5	---	---	---
Goldenweed	HAPLO2	---	---	---	---	---	2-5
Tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5
Black sagebrush	ARARN	30-40	25-35	1-5	---	1-5	25-35
Shadscale	ATCO	2-5	---	---	---	---	2-5
Downy rabbitbrush	CHVIP4	---	2-5	---	---	---	---
Antelope bitterbrush	PUTR2	---	---	1-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---
Winterfat	EULA5	---	---	---	---	---	2-5
Utah juniper	JUOS	---	---	1-5	---	1-5	---
Singleleaf pinyon	PIMO	---	---	---	---	1-5	---

Range site number:	028BY016NV	028BY011NV	028BY083NV	028BY010NV	028BY060NV	028BY008NV
Potential production (lb/acre):						
Favorable years	400	600	175	800	500	600
Normal years	250	400	125	600	375	400
Unfavorable years	100	250	75	400	250	200

120-Tecomar-Pookaloo-Zimbob association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Tecomar	Pookaloo	Zimbob	1	2	3	4
Indian ricegrass	ORHY	5-15	1-5	10-20	15-25	20-30	---	15-25
Needleandthread	STCO4	2-5	---	10-20	---	10-20	---	5-10
Bluebunch wheatgrass	AGSP	20-40	1-5	---	2-5	---	---	---
Muttongrass	POFE	2-5	---	---	---	---	---	---
Bluegrass	POA++	---	1-5	---	---	---	---	---
Bottlebrush squirreltail	SIHY	---	1-5	2-5	2-5	5-10	---	2-5
Thurber needlegrass	STTH2	---	1-5	---	---	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	2-5	2-5	---	---
Pine needlegrass	STPI2	---	---	---	2-5	---	---	---
Goldenweed	HAPLO2	2-5	---	---	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
Scarlet globemallow	SPCO	---	---	---	---	---	---	2-5
Winterfat	EULA5	2-5	---	---	---	---	---	---
Black sagebrush	ARARN	25-35	1-5	30-40	40-50	---	---	---
Shadscale	ATCO	2-5	---	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---	25-35
Rabbitbrush	CHRSY9	---	---	---	---	2-5	---	---
Spiny hopsage	GRSP	---	---	---	---	---	---	15-25
Utah juniper	JUOS	---	1-5	---	1-3	---	---	---
Singleleaf pinyon	PIMO	---	1-5	---	---	---	---	---

Range site number:	028BY008NV	028BY060NV	028BY016NV	028BY059NV	028BY010NV	None	028BY052NV
Potential production (lb/acre):							
Favorable years	600	500	400	400	800	---	700
Normal years	400	375	250	350	600	---	500
Unfavorable years	200	250	100	125	400	---	400

124-Tecomar-Pookaloo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Tecomar, moist	Pookaloo	Tecomar	1	2	3	4
Bluebunch wheatgrass	AGSP	15-25	1-5	20-40	---	---	15-30	10-15
Pine needlegrass	STPI2	2-5	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	---	---	---	---	---	---
Indian ricegrass	ORHY	5-10	1-5	5-15	---	2-5	5-15	20-30
Bluegrass	POA++	---	1-5	---	---	---	---	2-8
Bottlebrush squirreltail	SIHY	---	1-5	---	---	---	---	---
Thurber needlegrass	STTH2	---	1-5	---	---	---	---	---
Needleandthread	STCO4	---	---	2-5	---	---	2-5	---
Muttongrass	POFE	---	---	2-5	---	---	2-8	---
Scribner needlegrass	STSC2	---	---	---	---	2-10	---	---
Goldenweed	HAPLO2	---	---	2-5	---	5-10	---	---
Tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---	---	---
Mexican cliffrose	COME5	1-10	---	---	---	---	---	---
Black sagebrush	ARARN	40-50	1-5	25-35	---	2-8	25-35	---
Winterfat	EULA5	---	---	2-5	---	---	2-5	---
Shadscale	ATCO	---	---	2-5	---	---	2-5	---
Littleleaf mountainmahogany	CEIN7	---	---	---	---	60-70	---	---
Desert snowberry	SYLO	---	---	---	---	2-8	---	---
Big sagebrush	ARTR2	---	---	---	---	---	---	25-35
Antelope bitterbrush	PUTR2	---	---	---	---	---	---	1-8
Singleleaf pinyon	PIMO	1-3	1-5	---	---	---	---	---
Utah juniper	JUOS	---	1-5	---	---	1-3	---	---

Range site number: 028BY090NV 028BY060NV 028BY008NV None 028BY066NV 028BY006NV 028BY094NV

Potential production (lb/acre):

Favorable years	400	500	600	---	1,300	800	800
Normal years	350	375	400	---	1,000	600	600
Unfavorable years	125	250	200	---	800	400	400

126-Tecomar-Xine-Pookaloo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Tecomar	Xine	Pookaloo	1	2	3	4
Indian ricegrass	ORHY	5-15	2-5	1-5	1-5	2-5	5-10	10-20
Needleandthread	STCO4	2-5	---	---	---	---	---	10-20
Bluebunch wheatgrass	AGSP	20-40	30-40	1-5	1-5	10-20	---	---
Muttongrass	POFE	2-5	---	---	---	2-8	---	---
Basin wildrye	ELCI2	---	2-8	---	---	---	10-20	---
Bluegrass	POA++	---	5-10	1-5	1-5	---	---	---
Bottlebrush squirreltail	SIHY	---	---	1-5	1-5	---	---	2-5
Thurber needlegrass	STH2	---	---	1-5	1-5	---	---	---
Needlegrass	STIPA	---	---	---	---	5-10	---	---
Thickspike wheatgrass	AGDA	---	---	---	---	---	5-10	---
Sandberg bluegrass	POSE	---	---	---	---	---	---	2-5
Goldenweed	HAPLO2	2-5	---	---	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
Winterfat	EULA5	2-5	---	---	---	---	---	---
Black sagebrush	ARARN	25-35	---	1-5	1-5	---	---	30-40
Shadscale	ATCO	2-5	---	---	---	---	---	2-5
Mountain big sagebrush	ARVA2	---	15-25	---	---	15-25	---	---
Antelope bitterbrush	PUTR2	---	2-10	---	---	---	---	---
Snowberry	SYMPH	---	2-5	---	---	2-8	---	---
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	---
Utah juniper	JUOS	---	---	1-5	1-5	---	---	---
Singleleaf pinyon	PIMO	---	---	1-5	1-5	---	---	---
Curleaf mountainmahogany	CELE3	---	---	---	---	30-50	---	---

Range site number:

028BY008NV 028BY088NV 028BY060NV 028BY060NV 028BY032NV 028BY045NV 028BY016NV

Potential production (lb/acre):

Favorable years	600	1,100	500	500	1,300	1,000	400
Normal years	400	900	375	375	900	800	250
Unfavorable years	200	700	250	250	600	600	100

160-Zerk-Heist-Tosser association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Zerk	Heist	Tosser	1	2	3	4
Indian ricegrass	ORHY	35-45	30-50	10-20	15-25	10-20	10-20	1-5
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	5-10	2-5	5-15	5-10
Sandberg bluegrass	POSE	5-10	---	2-5	---	---	---	---
Needleandthread	STCO4	---	---	10-20	---	---	---	---
Globemallow	SPHAE	1-5	---	---	2-5	2-5	2-5	---
Shadscale	ATCO	20-30	---	2-5	---	---	40-50	70-90
Winterfat	EULA5	5-10	20-30	---	40-50	2-5	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---	---
Bud sagebrush	ARSP5	---	2-8	---	2-8	---	10-15	---
Black sagebrush	ARARN	---	---	30-40	---	---	---	---
Spiny hopsage	GRSP	---	---	---	---	10-20	---	---
Fourwing saltbush	ATCA2	---	---	---	---	15-30	---	---

Range site number: 028BY075NV 028BY084NV 028BY016NV 028BY013NV 028BY078NV 028BY017NV 028BY073NV

Potential production (lb/acre):

Favorable years	700	900	400	700	600	700	500
Normal years	500	700	250	500	500	400	400
Unfavorable years	300	400	100	350	400	250	300

162-Broyles-Kunzler-Heist association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Broyles	Kunzler	Heist	1	2	3	4
Indian ricegrass	ORHY	35-45	2-10	30-50	20-30	35-45	5-10	2-5
Bottlebrush squirreltail	SIHY	2-5	---	2-5	10-20	2-5	---	2-5
Sandberg bluegrass	POSE	5-10	---	---	---	5-10	---	---
Basin wildrye	ELCI2	---	10-20	---	---	---	10-20	---
Thickspike wheatgrass	AGDA	---	---	---	---	---	5-10	---
Globemallow	SPHAE	1-5	---	---	2-5	1-5	---	---
Shadscale	ATCO	20-30	---	---	50-60	20-30	---	20-50
Winterfat	EULA5	5-10	---	20-30	---	5-10	---	---
Big sagebrush	ARTR2	---	20-30	---	---	---	---	---
Rubber rabbitbrush	CHNA2	---	2-5	---	---	---	---	---
Black greasewood	SAVE4	---	30-40	---	---	---	---	20-30
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---	---	---
Bud sagebrush	ARSP5	---	---	2-8	---	---	---	2-10
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	---

Range site number: 028BY075NV 028BY028NV 028BY084NV 028BY009NV 028BY075NV 028BY045NV 028BY074NV

Potential production (lb/acre):

Favorable years	700	800	900	500	700	1,000	600
Normal years	500	600	700	400	500	800	400
Unfavorable years	300	400	400	300	300	600	200

166-Tosser-Pyrat-Linoyer association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Tosser	Pyrat	Linoyer	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---	---
Bottlebrush squirreltail	SIHY	2-5	5-10	5-10	5-10	5-15	2-5	---
Indian ricegrass	ORHY	10-20	20-30	15-25	1-5	---	30-50	5-10
Needleandthread	STCO4	10-20	10-20	---	---	---	---	---
Bluegrass	POA++	---	---	---	---	5-10	---	---
Basin wildrye	ELCI2	---	---	---	---	---	---	10-20
Thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
Globemallow	SPHAE	---	---	2-5	---	---	---	---
Black sagebrush	ARARN	30-40	---	---	---	---	---	---
Shadscale	ATCO	2-5	---	---	70-90	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	60-70	---	25-35
Rabbitbrush	CHRSY9	---	2-5	---	---	---	---	---
Winterfat	EULA5	---	---	40-50	---	---	20-30	---
Bud sagebrush	ARSP5	---	---	2-8	---	---	2-8	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5	---

Range site number: 028BY016NV 028BY010NV 028BY013NV 028BY073NV 028BY056NV 028BY084NV 028BY045NV

Potential production (lb/acre):

Favorable years	400	800	700	500	450	900	1,000
Normal years	250	600	500	400	325	700	800
Unfavorable years	100	400	350	300	150	400	600

170-Blimo-Hessing-Zerk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Blimo	Hessing	Zerk	1	2	3	4
Wheatgrass	AGROP2	5-10	---	---	---	---	---	---
Indian ricegrass	ORHY	15-25	10-20	35-45	30-50	15-25	2-10	---
Bottlebrush squirreltail	SIHY	2-8	5-15	2-5	2-5	---	---	---
Sandberg bluegrass	POSE	2-5	---	5-10	---	---	---	---
Needleandthread	STCO4	---	---	---	---	15-25	---	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-15	---	---
Basin wildrye	ELCI2	---	---	---	---	---	10-20	---
Sedge	CAREX	---	---	---	---	---	---	10-15
Alkali bluegrass	POJU	---	---	---	---	---	---	2-10
Inland saltgrass	DISPS2	---	---	---	---	---	---	20-35
Alkali muhly	MUAS	---	---	---	---	---	---	2-5
Alkali sacaton	SPAI	---	---	---	---	---	---	2-10
Western wheatgrass	AGSM	---	---	---	---	---	---	2-10
Rush	JUNCU	---	---	---	---	---	---	2-8
Wildrye	ELYMU	---	---	---	---	---	---	5-15
Globeamallow	SPHAE	---	2-5	1-5	---	---	---	---
Douglas rabbitbrush	CHVI8	2-5	---	---	2-5	---	---	---
Winterfat	EULA5	5-15	---	5-10	20-30	2-5	---	---
Wyoming big sagebrush	ARTRW	30-40	---	---	---	---	---	---
Shadscale	ATCO	---	40-50	20-30	---	---	---	---
Bud sagebrush	ARSP5	---	10-15	---	2-8	---	---	---
Big sagebrush	ARTR2	---	---	---	---	15-25	20-30	---
Fourwing saltbush	ATCA2	---	---	---	---	2-8	---	---
Rabbitbrush	CHRY89	---	---	---	---	2-5	---	---
Rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5	---
Black greasewood	SAVE4	---	---	---	---	---	30-40	---

Range site number: 028BY014NV 028BY017NV 028BY075NV 028BY084NV 028BY005NV 028BY028NV 028BY012NV

Potential production (lb/acre):

Favorable years	600	700	700	900	800	800	1,600
Normal years	450	400	500	700	600	600	1,200
Unfavorable years	200	250	300	400	400	400	800

173-Tulas-Yody-Heist association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Tulase	Yody	Heist	1	2	3
Basin wildrye	ELCI2	10-20	---	---	---	---	---
Indian ricegrass	ORHY	5-10	5-10	30-50	20-30	15-25	20-30
Thickspike wheatgrass	AGDA	5-10	---	---	---	---	---
Thurber needlegrass	STTH2	---	20-40	---	---	---	---
Needleandthread	STCO4	---	5-10	---	10-20	5-15	10-20
Bluegrass	POA++	---	2-5	---	---	---	---
Bottlebrush squirreltail	SIHY	---	---	2-5	5-10	2-5	5-10
Sandberg bluegrass	POSE	---	---	---	2-5	2-10	2-5
Crag aster	ASSC3	---	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	25-35	20-30	---	25-35	---	25-35
Spiny hopsage	GRSP	---	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---	---
Bud sagebrush	ARSP5	---	---	2-8	---	---	---
Winterfat	EULA5	---	---	20-30	---	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	2-5
Black sagebrush	ARARN	---	---	---	---	25-35	---
Downy rabbitbrush	CHVIP4	---	---	---	---	2-5	---

Range site number:	028BY045NV	028BY086NV	028BY084NV	028BY010NV	028BY011NV	028BY010NV
Potential production (lb/acre):						
Favorable years	1,000	800	900	800	600	800
Normal years	800	600	700	600	400	600
Unfavorable years	600	350	400	400	250	400

174-Blimo-Pyrat association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Blimo	Pyrat	1	2
Thurber needlegrass	STTH2	10-40	10-40	---	---
Bluegrass	POA++	2-5	2-5	---	---
Webber ricegrass	STWE	2-5	2-5	---	---
Indian ricegrass	ORHY	2-10	2-10	2-10	20-30
Bluebunch wheatgrass	AGSP	10-40	10-40	---	---
Basin wildrye	ELCI2	---	---	10-20	---
Sandberg bluegrass	POSE	---	---	---	2-5
Needleandthread	STCO4	---	---	---	10-20
Bottlebrush squirreltail	SIHY	---	---	---	5-10
Globemallow	SPHAE	2-5	2-5	---	---
Big sagebrush	ARTR2	---	---	20-30	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---
Black greasewood	SAVE4	---	---	30-40	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35
Rabbitbrush	CHRSY9	---	---	---	2-5

Range site number:	025XY019NV	025XY019NV	028BY028NV	028BY010NV
Potential production (lb/acre):				
Favorable years	800	800	800	800
Normal years	600	600	600	600
Unfavorable years	400	400	400	400

179-Tulase-Pern association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Tulase	Pern	1	2	3
Basin wildrye	ELCI2	10-20	70-80	---	10-20	---
Indian ricegrass	ORHY	5-10	---	20-30	2-10	---
Thickspike wheatgrass	AGDA	5-10	---	---	---	---
Nevada bluegrass	PONE3	---	5-10	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	---	---
Needleandthread	STCO4	---	---	10-20	---	---
Bottlebrush squirreltail	SIHY	---	---	5-10	---	---
Sedge	CAREX	---	---	---	---	20-30
Bluegrass	POA++	---	---	---	---	25-40
Baltic rush	JUBA	---	---	---	---	10-15
Cinquefoil	POTEN	---	---	---	---	2-5
Groundsel	SENEC	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---
Basin big sagebrush	ARTRT	---	5-10	---	---	---
Rabbitbrush	CHRSY9	---	---	2-5	---	---
Big sagebrush	ARTR2	---	---	---	20-30	---
Rubber rabbitbrush	CHNA2	---	---	---	2-5	---
Black greasewood	SAVE4	---	---	---	30-40	---

Range site number:	028BY045NV	028BY003NV	028BY010NV	028BY028NV	028BY001NV
Potential production (lb/acre):					
Favorable years	1,000	5,000	800	800	4,000
Normal years	800	2,500	600	600	2,000
Unfavorable years	600	1,500	400	400	1,200

181-Pyrat-Cowgil-Broyles association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Pyrat	Cowgil	Broyles	1	2
Sandberg bluegrass	POSE	2-5	2-5	5-10	---	5-10
Needleandthread	STCO4	10-20	10-20	---	---	---
Indian ricegrass	ORHY	20-30	20-30	35-45	10-20	35-45
Bottlebrush squirreltail	SIHY	5-10	5-10	2-5	5-15	2-5
Globemallow	SPHAE	---	---	1-5	2-5	1-5
Wyoming big sagebrush	ARTRW	25-35	25-35	---	---	---
Rabbitbrush	CHRSY9	2-5	2-5	---	---	---
Shadscale	ATCO	---	---	20-30	40-50	20-30
Winterfat	EULAS	---	---	5-10	---	5-10
Bud sagebrush	ARSP5	---	---	---	10-15	---

Range site number:	028BY010NV	028BY010NV	028BY075NV	028BY017NV	028BY075NV
Potential production (lb/acre):					
Favorable years	800	800	700	700	700
Normal years	600	600	500	400	500
Unfavorable years	400	400	300	250	300

185-Pyrat-Heist-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pyrat	Heist	Tulase	1	2	3	4
Sandberg bluegrass	POSE	2-5	---	---	2-10	---	5-10	2-5
Needleandthread	STCO4	10-20	---	---	5-15	---	---	10-20
Indian ricegrass	ORHY	20-30	30-50	5-10	15-25	15-25	35-45	10-20
Bottlebrush squirreltail	SIHY	5-10	2-5	---	2-5	5-10	2-5	2-5
Basin wildrye	ELCI2	---	---	10-20	---	---	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	---	---
Globemallow	SPHAE	---	---	---	---	2-5	1-5	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---	---	---
Rabbitbrush	CHRSY9	2-5	---	---	---	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---	---
Bud sagebrush	ARSP5	---	2-8	---	---	2-8	---	---
Winterfat	EULA5	---	20-30	---	---	40-50	5-10	---
Black sagebrush	ARARN	---	---	---	25-35	---	---	30-40
Downy rabbitbrush	CHVIP4	---	---	---	2-5	---	---	---
Shadscale	ATCO	---	---	---	---	---	20-30	2-5

Range site number:

028BY010NV 028BY084NV 028BY045NV 028BY011NV 028BY013NV 028BY075NV 028BY016NV

Potential production (lb/acre):

Favorable years	800	900	1,000	600	700	700	400
Normal years	600	700	800	400	500	500	250
Unfavorable years	400	400	600	250	350	300	100

189-Pyrat-Linoyer association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Pyrat	Linoyer	1	2	3	4
Sandberg bluegrass	POSE	2-5	---	---	2-5	2-5	5-10
Needleandthread	STCO4	10-20	---	---	10-20	---	---
Indian ricegrass	ORHY	20-30	15-25	2-10	20-30	15-25	35-45
Bottlebrush squirreltail	SIHY	5-10	5-10	---	2-5	2-8	2-5
Basin wildrye	ELCI2	---	---	10-20	---	---	---
Wheatgrass	AGROP2	---	---	---	---	5-10	---
Globemallow	SPHAE	---	2-5	---	---	---	1-5
Wyoming big sagebrush	ARTRW	25-35	---	---	25-35	30-40	---
Rabbitbrush	CHRSY9	2-5	---	---	---	---	---
Winterfat	EULA5	---	40-50	---	---	5-15	5-10
Bud sagebrush	ARSP5	---	2-8	---	---	---	---
Big sagebrush	ARTR2	---	---	20-30	---	---	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---	---	---
Black greasewood	SAVE4	---	---	30-40	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---
Shadscale	ATCO	---	---	---	---	---	20-30

Range site number:	028BY010NV	028BY013NV	028BY028NV	028BY080NV	028BY014NV	028BY075NV
Potential production (lb/acre):						
Favorable years	800	700	800	600	600	700
Normal years	600	500	600	400	450	500
Unfavorable years	400	350	400	200	200	300

190-Cowgil-Yody-Fax association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Cowgil	Yody	Fax	1	2	3
Sandberg bluegrass	POSE	2-5	---	---	2-5	---	---
Needleandthread	STCO4	10-20	5-10	2-8	10-20	---	---
Indian ricegrass	ORHY	20-30	5-10	2-5	20-30	---	---
Bottlebrush squirreltail	SIHY	5-10	---	---	5-10	---	---
Thurber needlegrass	STTH2	---	20-40	30-40	---	---	---
Bluegrass	POA++	---	2-5	2-8	---	2-8	---
Bluebunch wheatgrass	AGSP	---	---	5-10	---	30-40	---
Needlegrass	STIPA	---	---	---	---	5-15	---
Basin wildrye	ELCI2	---	---	---	---	2-8	70-80
Nevada bluegrass	PONE3	---	---	---	---	---	5-10
Crag aster	ASSC3	---	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	2-5	---	2-5	---
Arrowleaf balsamroot	BASA3	---	---	2-5	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	20-30	---	25-35	---	---
Rabbitbrush	CHRSY9	2-5	---	---	2-5	---	---
Spiny hopsage	GRSP	---	2-5	---	---	---	---
Big sagebrush	ARTR2	---	---	15-25	---	---	---
Antelope bitterbrush	PUTR2	---	---	2-10	---	2-8	---
Snowberry	SYMPH	---	---	---	---	5-10	---
Utah serviceberry	AMUT	---	---	---	---	5-10	---
Mountain big sagebrush	ARVA2	---	---	---	---	15-20	---
Basin big sagebrush	ARTRT	---	---	---	---	---	5-10

Range site number:	028BY010NV	028BY086NV	028BY007NV	028BY010NV	028BY015NV	028BY003NV
Potential production (lb/acre):						
Favorable years	800	800	1,000	800	1,500	5,000
Normal years	600	600	800	600	1,100	2,500
Unfavorable years	400	350	600	400	700	1,500

192-Cowgil-Yody association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Cowgil	Yody	1	2	3
Sandberg bluegrass	POSE	2-5	2-5	---	---	---
Needleandthread	STCO4	10-20	10-20	---	---	2-8
Indian ricegrass	ORHY	20-30	20-30	30-50	10-20	20-30
Bottlebrush squirreltail	SIHY	5-10	5-10	2-5	5-15	---
Thurber needlegrass	STTH2	---	---	---	---	15-25
Globemallow	SPHAE	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	---	---
Rabbitbrush	CHRSY9	2-5	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---
Bud sagebrush	ARSP5	---	---	2-8	10-15	---
Winterfat	EULA5	---	---	20-30	---	---
Shadscale	ATCO	---	---	---	40-50	---
Black sagebrush	ARARN	---	---	---	---	20-35

Range site number:	028BY010NV	028BY010NV	028BY084NV	028BY017NV	028BY089NV
Potential production (lb/acre):					
Favorable years	800	800	900	700	450
Normal years	600	600	700	400	300
Unfavorable years	400	400	400	250	150

201-Hyzen-Pookaloo-Tecomar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Hyzen	Pookaloo	Tecomar	1	2	3	4
Scribner needlegrass	STSC2	2-10	---	---	---	---	---	---
Indian ricegrass	ORHY	2-5	1-5	5-15	---	10-20	20-30	1-5
Bluegrass	POA++	---	1-5	---	---	---	---	1-5
Bottlebrush squirreltail	SIHY	---	1-5	---	---	2-5	5-10	1-5
Bluebunch wheatgrass	AGSP	---	1-5	20-40	---	---	---	1-5
Thurber needlegrass	STTH2	---	1-5	---	---	---	---	1-5
Needleandthread	STCO4	---	---	2-5	---	10-20	10-20	---
Muttongrass	POFE	---	---	2-5	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	2-5	2-5	---
Goldenweed	HAPLO2	5-10	---	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
Littleleaf mountainmahogany	CEIN7	60-70	---	---	---	---	---	---
Black sagebrush	ARARN	2-8	1-5	25-35	---	30-40	---	1-5
Desert snowberry	SYLO	2-8	---	---	---	---	---	---
Winterfat	EULA5	---	---	2-5	---	---	---	---
Shadscale	ATCO	---	---	2-5	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	---
Rabbitbrush	CHRSY9	---	---	---	---	---	2-5	---
Utah juniper	JUOS	1-3	1-5	---	---	---	---	1-5
Singleleaf pinyon	PIMO	---	1-5	---	---	---	---	1-5

Range site number:	028BY066NV	028BY060NV	028BY008NV	None	028BY016NV	028BY010NV	028BY060NV
Potential production (lb/acre):							
Favorable years	1,300	500	600	---	400	800	500
Normal years	1,000	375	400	---	250	600	375
Unfavorable years	800	250	200	---	100	400	250

205-Hyzen-Hardzem-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Hyzen	Hardzem	Rock outcrop	1	2
Scribner needlegrass	STSC2	2-10	---	---	---	---
Indian ricegrass	ORHY	2-5	---	---	1-5	5-15
Spike-fescue	LEKI2	---	1-5	---	---	---
Muttongrass	POFE	---	1-5	---	---	2-5
Bluebunch wheatgrass	AGSP	---	1-5	---	1-5	20-40
Bluegrass	POA++	---	---	---	1-5	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---
Thurber needlegrass	STTH2	---	---	---	1-5	---
Needleandthread	STCO4	---	---	---	---	2-5
Goldenweed	HAPLO2	5-10	1-5	---	---	2-5
Creeping barberry	BERE	---	1-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5
Littleleaf mountainmahogany	CEIN7	60-70	---	---	---	---
Black sagebrush	ARARN	2-8	---	---	1-5	25-35
Desert snowberry	SYLO	2-8	---	---	---	---
Mountain big sagebrush	ARVA2	---	1-5	---	---	---
Common juniper	JUCO6	---	1-5	---	---	---
Limber pine	PIFL2	---	1-5	---	---	---
White fir	ABCO	---	1-5	---	---	---
Bristlecone pine	PIAR	---	1-5	---	---	---
Winterfat	EULA5	---	---	---	---	2-5
Shadscale	ATCO	---	---	---	---	2-5
Utah juniper	JUOS	1-3	---	---	1-5	---
Singleleaf pinyon	PIMO	---	---	---	1-5	---
Range site number:						
		028BY066NV	028BY063NV	None	028BY060NV	028BY008NV
Potential production (lb/acre):						
Favorable years		1,300	400	---	500	600
Normal years		1,000	275	---	375	400
Unfavorable years		800	150	---	250	200

220-Hutchley-McIvey-Suak association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Hutchley	McIvey	Suak	1	2	3	4
Pine needlegrass	STPI2	2-8	---	---	---	---	---	---
Bluegrass	POA++	5-10	2-8	---	1-5	2-8	2-8	---
Bluebunch wheatgrass	AGSP	20-40	30-40	10-20	1-5	20-30	10-20	---
Thurber needlegrass	STTH2	10-15	---	---	1-5	10-20	---	---
Needlegrass	STIPA	---	5-15	5-10	---	---	5-15	---
Basin wildrye	ELCI2	---	2-8	---	---	---	---	---
Indian ricegrass	ORHY	---	---	2-5	1-5	2-5	---	---
Muttongrass	POFE	---	---	2-8	---	---	---	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	---	---
Goldenweed	HAPLO2	2-5	---	---	---	---	---	---
Arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
Sagebrush	ARTEM	30-40	---	---	---	---	---	---
Snowberry	SYMPH	---	5-10	2-8	---	---	2-8	---
Utah serviceberry	AMUT	---	5-10	---	---	---	35-45	---
Mountain big sagebrush	ARVA2	---	15-20	15-25	---	---	5-15	---
Antelope bitterbrush	PUTR2	---	2-8	---	---	---	---	---
Black sagebrush	ARARN	---	---	---	1-5	25-35	---	---
Curleaf mountainmahogany	CELE3	---	---	30-50	---	---	---	---
Utah juniper	JUOS	---	---	---	1-5	---	---	---
Singleleaf pinyon	PIMO	---	---	---	1-5	---	---	---

Range site number: 028BY034NV 028BY015NV 028BY032NV 028BY060NV 028BY093NV 028BY026NV None

Potential production (lb/acre):

Favorable years	400	1,500	1,300	500	800	1,200	---
Normal years	250	1,100	900	375	600	900	---
Unfavorable years	150	700	600	250	400	700	---

223-Hutchley-McIvey-Pookaloo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Hutchley	McIvey	Pookaloo	1	2	3	4
Pine needlegrass	STPI2	2-8	---	---	---	---	---	---
Bluegrass	POA++	5-10	2-8	1-5	2-10	---	---	2-8
Bluebunch wheatgrass	AGSP	20-40	30-40	1-5	20-30	1-5	---	30-40
Thurber needlegrass	STTH2	10-15	---	1-5	---	1-5	---	10-20
Needlegrass	STIPA	---	5-15	---	---	---	---	---
Basin wildrye	ELCI2	---	2-8	---	---	---	---	2-10
Indian ricegrass	ORHY	---	---	1-5	---	1-5	---	---
Bottlebrush squirreltail	SIHY	---	---	1-5	---	---	---	---
Muttongrass	POFE	---	---	---	---	1-5	---	---
Canby bluegrass	POCA	---	---	---	---	1-5	---	---
Goldenweed	HAPLO2	2-5	---	---	---	---	---	---
Arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
Sagebrush	ARTEM	30-40	---	---	---	---	---	---
Snowberry	SYMPH	---	5-10	---	---	---	---	---
Utah serviceberry	AMUT	---	5-10	---	---	---	---	---
Mountain big sagebrush	ARVA2	---	15-20	---	---	---	---	20-25
Antelope bitterbrush	PUTR2	---	2-8	---	2-5	1-5	---	2-10
Black sagebrush	ARARN	---	---	1-5	---	---	---	---
Low sagebrush	ARAR8	---	---	---	25-35	1-5	---	---
Serviceberry	AMELA	---	---	---	---	1-5	---	---
Utah juniper	JUOS	---	---	1-5	---	1-5	---	---
Singleleaf pinyon	PIMO	---	---	1-5	---	1-5	---	---

Range site number: 028BY034NV 028BY015NV 028BY060NV 028BY037NV 028BY064NV None 028BY030NV

Potential production (lb/acre):

Favorable years	400	1,500	500	800	500	---	1,500
Normal years	250	1,100	375	600	375	---	1,200
Unfavorable years	150	700	250	400	250	---	900

224-Hutchley-McIvey-Segura association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Hutchley	McIvey	Segura	1	2	3	4
Pine needlegrass	STPI2	2-8	---	---	---	---	---	---
Bluegrass	POA++	5-10	2-8	2-5	---	2-10	2-8	---
Bluebunch wheatgrass	AGSP	20-40	30-40	20-40	---	20-30	30-40	---
Thurber needlegrass	STTH2	10-15	---	15-30	---	---	10-20	---
Needlegrass	STIPA	---	5-15	---	---	---	---	---
Basin wildrye	ELCI2	---	2-8	2-8	---	---	2-10	60-70
Nevada bluegrass	PONE3	---	---	---	---	---	---	5-10
Wheatgrass	AGROP2	---	---	---	---	---	---	5-10
Goldenweed	HAPLO2	2-5	---	---	---	---	---	---
Arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	2-5	---	---	---	---
Crag aster	ASSC3	---	---	2-5	---	---	---	---
Sagebrush	ARTEM	30-40	---	---	---	---	---	---
Snowberry	SYMPH	---	5-10	---	---	---	---	---
Utah serviceberry	AMUT	---	5-10	---	---	---	---	---
Mountain big sagebrush	ARVA2	---	15-20	15-25	---	---	20-25	5-15
Antelope bitterbrush	PUTR2	---	2-8	5-10	---	2-5	2-10	---
Low sagebrush	ARAR8	---	---	---	---	25-35	---	---
Willow	SALIX	---	---	---	---	---	---	2-5

Range site number: 028BY034NV 028BY015NV 028BY087NV None 028BY037NV 028BY030NV 028BY024NV

Potential production (lb/acre):

Favorable years	400	1,500	900	---	800	1,500	5,000
Normal years	250	1,100	700	---	600	1,200	2,500
Unfavorable years	150	700	450	---	400	900	1,500

226-Hutchley-Tusel-Suak association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Hutchley	Tusel	Suak	1	2	3	4
Pine needlegrass	STPI2	2-8	---	---	---	---	---	---
Bluegrass	POA++	5-10	---	---	5-15	---	---	---
Bluebunch wheatgrass	AGSP	20-40	2-5	10-20	2-5	5-10	---	---
Thurber needlegrass	STTH2	10-15	---	---	2-5	---	---	---
Letterman needlegrass	STLE4	---	2-5	---	---	---	---	---
Idaho fescue	FEID	---	2-10	---	10-30	30-50	---	---
Slender wheatgrass	AGTR	---	5-15	---	---	---	---	---
Mountain brome	BRCA5	---	5-15	---	---	1-10	---	---
Bulbous oniongrass	MEBU	---	2-5	---	---	---	---	---
Nevada bluegrass	PONE3	---	2-5	---	---	---	---	50-60
Spike-fescue	LEKI2	---	2-5	---	---	---	---	---
Blue wildrye	ELGL	---	2-5	---	---	---	---	---
Indian ricegrass	ORHY	---	---	2-5	---	---	---	---
Needlegrass	STIPA	---	---	5-10	---	---	---	---
Muttongrass	POFE	---	---	2-8	---	---	---	---
Webber ricegrass	STWE	---	---	---	5-10	---	---	---
Bottlebrush squirreltail	SIHY	---	---	---	2-5	---	---	---
Columbia needlegrass	STNE3	---	---	---	---	1-10	---	---
Sedge	CAREX	---	---	---	---	---	---	5-15
Meadow barley	HOBR2	---	---	---	---	---	---	5-10
Mat muhly	MURI	---	---	---	---	---	---	5-10
Kentucky bluegrass	POPR	---	---	---	---	---	---	2-5
Alpine timothy	PHAL2	---	---	---	---	---	---	20-30
Goldenweed	HAPLO2	2-5	---	---	2-5	---	---	---
Groundsel	SENEC	---	2-10	---	---	---	---	---
Carrotleaf lomatium	LODIM	---	2-5	---	---	---	---	---
Clover	TRIFO	---	2-5	---	---	---	---	---
Horsemint giant hyssop	AGUR	---	2-5	---	---	---	---	---
Geranium	GERAN	---	2-10	---	---	---	---	---
Eriogonum	ERIOG	---	---	---	1-5	---	---	---
Daisy	ERIGE2	---	---	---	1-5	---	---	---
Hooker balsamroot	BAHO	---	---	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	---	2-5	5-10	---	---
Phlox	PHLOX	---	---	---	2-5	---	---	---
Arrowleaf balsamroot	BASA3	---	---	---	---	5-10	---	---
Lupine	LUPIN	---	---	---	---	2-5	---	---
Sagebrush	ARTEM	30-40	---	---	15-25	---	---	---
Snowberry	SYMPH	---	2-10	2-8	---	2-5	---	---
Common chokecherry	PRVI	---	2-5	---	---	---	---	---
Antelope bitterbrush	PUTR2	---	2-5	---	---	5-10	---	---
Mountain big sagebrush	ARVA2	---	5-10	15-25	---	10-20	---	---
Serviceberry	AMELA	---	2-5	---	---	---	---	---
Utah serviceberry	AMUT	---	2-5	---	---	---	---	---
Winterfat	EULA5	---	---	---	1-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	1-3	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	30-50	---	---	---	---

Range site number: 028BY034NV 025XY004NV 028BY032NV 025XY024NV 025XY056NV None 028BY095NV

Potential production (lb/acre):

Favorable years	400	2,600	1,300	350	1,800	---	1,600
Normal years	250	1,800	900	250	1,200	---	1,300
Unfavorable years	150	1,400	600	150	800	---	800

230-Linoyer-Katelana association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Linoyer	Katelana	1	2	3	4
Bottlebrush squirreltail	SIHY	5-10	5-10	---	5-10	2-5	5-15
Indian ricegrass	ORHY	15-25	1-5	2-10	20-30	2-5	10-20
Basin wildrye	ELCI2	---	---	10-20	---	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	---	---
Needleandthread	STCO4	---	---	---	10-20	---	---
Globemallow	SPHAE	2-5	---	---	---	---	2-5
Winterfat	EULA5	40-50	---	---	---	---	---
Bud sagebrush	ARSP5	2-8	---	---	---	2-10	10-15
Shadscale	ATCO	---	70-90	---	---	20-50	40-50
Big sagebrush	ARTR2	---	---	20-30	---	---	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---	---	---
Black greasewood	SAVE4	---	---	30-40	---	20-30	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---

Range site number:	028BY013NV	028BY073NV	028BY028NV	028BY010NV	028BY074NV	028BY017NV
Potential production (lb/acre):						
Favorable years	700	500	800	800	600	700
Normal years	500	400	600	600	400	400
Unfavorable years	350	300	400	400	200	250

231-Linoyer very fine sandy loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions	
		Soil name	Inclusion number
		Linoyer	1
Bottlebrush squirreltail	SIHY	5-10	---
Indian ricegrass	ORHY	15-25	5-10
Basin wildrye	ELCI2	---	10-20
Thickspike wheatgrass	AGDA	---	5-10
Globemallow	SPHAE	2-5	---
Winterfat	EULA5	40-50	---
Bud sagebrush	ARSP5	2-8	---
Wyoming big sagebrush	ARTRW	---	25-35

Range site number: 028BY013NV 028BY045NV

Potential production (lb/acre):

Favorable years	700	1,000
Normal years	500	800
Unfavorable years	350	600

232-Linoyer-Heist-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Linoyer	Heist	Tulase	1	2
Bottlebrush squirreltail	SIHY	5-10	2-5	---	5-10	---
Indian ricegrass	ORHY	15-25	30-50	5-10	20-30	---
Basin wildrye	ELCI2	---	---	10-20	---	70-80
Thickspike wheatgrass	AGDA	---	---	5-10	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	---
Needleandthread	STCO4	---	---	---	10-20	---
Nevada bluegrass	PONE3	---	---	---	---	5-10
Globemallow	SPHAE	2-5	---	---	---	---
Winterfat	EULA5	40-50	20-30	---	---	---
Bud sagebrush	ARSP5	2-8	2-8	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	25-35	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---
Basin big sagebrush	ARTRT	---	---	---	---	5-10

Range site number:	028BY013NV	028BY084NV	028BY045NV	028BY010NV	028BY003NV
Potential production (lb/acre):					
Favorable years	700	900	1,000	800	5,000
Normal years	500	700	800	600	2,500
Unfavorable years	350	400	600	400	1,500

233-Linoyer silt loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name	Inclusion number--	
		Linoyer	1	2
Bottlebrush squirreltail	SIHY	5-10	2-8	5-10
Indian ricegrass	ORHY	15-25	15-25	20-30
Wheatgrass	AGROP2	---	5-10	---
Sandberg bluegrass	POSE	---	2-5	2-5
Needleandthread	STCO4	---	---	10-20
Globemallow	SPHAE	2-5	---	---
Winterfat	EULA5	40-50	5-15	---
Bud sagebrush	ARSP5	2-8	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---
Wyoming big sagebrush	ARTRW	---	30-40	25-35
Rabbitbrush	CHRSY9	---	---	2-5

Range site number: 028BY013NV 028BY014NV 028BY010NV

Potential production (lb/acre):

Favorable years	700	600	800
Normal years	500	450	600
Unfavorable years	350	200	400

241-Katelana, level-Raph association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Katelana	Raph	1	2	3	4
Bottlebrush squirreltail	SIHY	5-10	5-15	5-15	5-10	2-5	5-10
Indian ricegrass	ORHY	1-5	10-20	---	20-30	35-45	15-25
Bluegrass	POA++	---	---	5-10	---	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	5-10	---
Needleandthread	STCO4	---	---	---	10-20	---	---
Globemallow	SPHAE	---	2-5	---	---	1-5	2-5
Shadscale	ATCO	70-90	40-50	---	---	20-30	---
Bud sagebrush	ARSP5	---	10-15	---	---	---	2-8
Wyoming big sagebrush	ARTRW	---	---	60-70	25-35	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---
Winterfat	EULA5	---	---	---	---	5-10	40-50

Range site number:	028BY073NV	028BY017NV	028BY056NV	028BY010NV	028BY075NV	028BY013NV
Potential production (lb/acre):						
Favorable years	500	700	450	800	700	700
Normal years	400	400	325	600	500	500
Unfavorable years	300	250	150	400	300	350

242-Katelana association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Katelana, nearly level	Katelana, more sloping	1	2	3
Bottlebrush squirreltail	SIHY	5-10	2-5	---	---	---
Indian ricegrass	ORHY	1-5	2-5	2-10	---	---
Basin wildrye	ELCI2	---	---	10-20	70-80	2-5
Nevada bluegrass	PONE3	---	---	---	5-10	---
Alkali sacaton	SPAI	---	---	---	---	5-10
Inland saltgrass	DISPS2	---	---	---	---	2-8
Shadscale	ATCO	70-90	20-50	---	---	2-5
Bud sagebrush	ARSP5	---	2-10	---	---	---
Black greasewood	SAVE4	---	20-30	30-40	---	60-75
Big sagebrush	ARTR2	---	---	20-30	---	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---	2-5
Basin big sagebrush	ARTRT	---	---	---	5-10	---

Range site number:	028BY073NV	028BY074NV	028BY028NV	028BY003NV	028BY020NV
Potential production (lb/acre):					
Favorable years	500	600	800	5,000	500
Normal years	400	400	600	2,500	300
Unfavorable years	300	200	400	1,500	150

243-Katelana-Heist-Nyak association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name			Inclusion number--
		Katelana	Heist	Nyak	1
Bottlebrush squirreltail	SIHY	5-10	2-5	---	2-5
Indian ricegrass	ORHY	1-5	30-50	5-10	10-20
Basin wildrye	ELCI2	---	---	10-20	---
Thickspike wheatgrass	AGDA	---	---	5-10	---
Western wheatgrass	AGSM	---	---	---	5-15
Shadscale	ATCO	70-90	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---
Bud sagebrush	ARSP5	---	2-8	---	---
Winterfat	EULA5	---	20-30	---	2-5
Wyoming big sagebrush	ARTRW	---	---	25-35	---
Sickle saltbush	ATFA	---	---	---	45-55

Range site number:	028BY073NV	028BY084NV	028BY045NV	028BY065NV
Potential production (lb/acre):				
Favorable years	500	900	1,000	700
Normal years	400	700	800	500
Unfavorable years	300	400	600	350

244-Katelana-Raph association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Katelana	Raph	1	2
Indian ricegrass	ORHY	2-5	10-20	15-25	2-10
Bottlebrush squirreltail	SIHY	2-5	5-15	5-10	---
Basin wildrye	ELCI2	---	---	---	10-20
Globemallow	SPHAE	---	2-5	2-5	---
Shadscale	ATCO	20-50	40-50	---	---
Bud sagebrush	ARSP5	2-10	10-15	2-8	---
Black greasewood	SAVE4	20-30	---	---	30-40
Winterfat	EULA5	---	---	40-50	---
Big sagebrush	ARTR2	---	---	---	20-30
Rubber rabbitbrush	CHNA2	---	---	---	2-5

Range site number: 028BY074NV 028BY017NV 028BY013NV 028BY028NV

Potential production (lb/acre):

Favorable years	600	700	700	800
Normal years	400	400	500	600
Unfavorable years	200	250	350	400

246-Katelana-Blimo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Katelana	Blimo	1	2	3	4
Bottlebrush squirreltail	SIHY	10-20	2-8	2-5	---	---	2-5
Indian ricegrass	ORHY	20-30	15-25	30-50	2-10	5-10	2-5
Wheatgrass	AGROP2	---	5-10	---	---	---	---
Sandberg bluegrass	POSE	---	2-5	---	---	---	---
Basin wildrye	ELCI2	---	---	---	10-20	10-20	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
Globemallow	SPHAE	2-5	---	---	---	---	---
Shadscale	ATCO	50-60	---	---	---	---	20-50
Douglas rabbitbrush	CHVI8	---	2-5	2-5	---	---	---
Winterfat	EULA5	---	5-15	20-30	---	---	---
Wyoming big sagebrush	ARTRW	---	30-40	---	---	25-35	---
Bud sagebrush	ARSP5	---	---	2-8	---	---	2-10
Big sagebrush	ARTR2	---	---	---	20-30	---	---
Rubber rabbitbrush	CHNA2	---	---	---	2-5	---	---
Black greasewood	SAVE4	---	---	---	30-40	---	20-30

Range site number:	028BY009NV	028BY014NV	028BY084NV	028BY028NV	028BY045NV	028BY074NV
Potential production (lb/acre):						
Favorable years	500	600	900	800	1,000	600
Normal years	400	450	700	600	800	400
Unfavorable years	300	200	400	400	600	200

250-Sheffit-Katelana association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Sheffit	Katelana	1	2	3	4
Basin wildrye	ELCI2	10-20	---	2-5	2-5	---	70-80
Indian ricegrass	ORHY	2-10	2-5	---	5-10	1-5	---
Bottlebrush squirreltail	SIHY	---	2-5	---	---	5-10	---
Alkali sacaton	SPAI	---	---	5-10	---	---	---
Inland saltgrass	DISPS2	---	---	2-8	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10
Big sagebrush	ARTR2	20-30	---	---	---	---	---
Rubber rabbitbrush	CHNA2	2-5	---	2-5	---	---	---
Black greasewood	SAVE4	30-40	20-30	60-75	40-60	---	---
Shadscale	ATCO	---	20-50	2-5	5-10	70-90	---
Bud sagebrush	ARSP5	---	2-10	---	---	---	---
Fourwing saltbush	ATCA2	---	---	---	5-10	---	---
Basin big sagebrush	ARTRT	---	---	---	---	---	5-10

Range site number:	028BY028NV	028BY074NV	028BY020NV	028BY021NV	028BY073NV	028BY003NV
Potential production (lb/acre):						
Favorable years	800	600	500	400	500	5,000
Normal years	600	400	300	300	400	2,500
Unfavorable years	400	200	150	200	300	1,500

252-Sheffit-Equis association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Sheffit	Equis	Equis, wet	1	2
Basin wildrye	ELCI2	10-20	30-60	---	---	---
Indian ricegrass	ORHY	2-10	---	---	20-30	---
Alkali sacaton	SPAI	---	30-40	40-50	---	---
Inland saltgrass	DISPS2	---	2-5	2-5	---	---
Western wheatgrass	AGSM	---	2-5	---	---	---
Alkali cordgrass	SPGR	---	---	10-15	---	---
Baltic rush	JUBA	---	---	2-8	---	10-15
Sedge	CAREX	---	---	5-10	---	20-30
Sandberg bluegrass	POSE	---	---	---	2-5	---
Needleandthread	STCO4	---	---	---	10-20	---
Bottlebrush squirreltail	SIHY	---	---	---	5-10	---
Bluegrass	POA++	---	---	---	---	25-40
Cinquefoil	POTEN	---	---	---	---	2-5
Groundsel	SENEC	---	---	---	---	2-5
Big sagebrush	ARTR2	20-30	---	---	---	---
Rubber rabbitbrush	CHNA2	2-5	2-5	---	---	---
Black greasewood	SAVE4	30-40	5-15	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---

Range site number: 028BY028NV 028BY004NV 028BY002NV 028BY010NV 028BY001NV

Potential production (lb/acre):

Favorable years	800	2,200	1,500	800	4,000
Normal years	600	1,500	1,000	600	2,000
Unfavorable years	400	800	700	400	1,200

253-Sheffit-Zorravista association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Sheffit fine sand	Sheffit silt loam	Zorravista	1	2	3	4
Needleandthread	STCO4	15-25	---	2-5	---	5-15	---	---
Indian ricegrass	ORHY	15-25	2-10	10-25	2-5	15-25	10-20	---
Thickspike wheatgrass	AGDA	5-15	---	5-15	---	---	---	---
Basin wildrye	ELCI2	---	10-20	---	---	---	---	2-5
Bottlebrush squirreltail	SIHY	---	---	---	2-5	1-5	5-15	---
Galleta	HIJA	---	---	---	---	2-8	---	---
Desert needlegrass	STSP3	---	---	---	---	2-5	---	---
Sandberg bluegrass	POSE	---	---	---	---	2-5	---	---
Alkali sacaton	SPAI	---	---	---	---	---	---	5-10
Inland saltgrass	DISPS2	---	---	---	---	---	---	2-8
Globemallow	SPHAE	---	---	---	---	---	2-5	---
Big sagebrush	ARTR2	15-25	20-30	---	---	---	---	---
Fourwing saltbush	ATCA2	2-8	---	5-15	---	---	---	---
Winterfat	EULA5	2-5	---	---	---	2-5	---	---
Rabbitbrush	CHRY9	2-5	---	---	---	---	---	---
Rubber rabbitbrush	CHNA2	---	2-5	2-5	---	---	---	2-5
Black greasewood	SAVE4	---	30-40	---	20-30	---	---	60-75
Basin big sagebrush	ARTRT	---	---	30-40	---	---	---	---
Spiny hopsage	GRSP	---	---	5-10	---	---	---	---
Shadscale	ATCO	---	---	---	20-50	---	40-50	2-5
Bud sagebrush	ARSP5	---	---	---	2-10	---	10-15	---
Black sagebrush	ARARN	---	---	---	---	25-35	---	---
Nevada ephedra	EPNE	---	---	---	---	2-5	---	---

Range site number: 028BY005NV 028BY028NV 028BY068NV 028BY074NV 029XY008NV 028BY017NV 028BY020NV

Potential production (lb/acre):

Favorable years	800	800	800	600	700	700	500
Normal years	600	600	500	400	500	400	300
Unfavorable years	400	400	300	200	250	250	150

254-Sheffit-Boofuss association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Sheffit	Boofuss	1	2	3
Basin wildrye	ELCI2	10-20	30-60	---	2-5	2-5
Indian ricegrass	ORHY	2-10	---	---	---	---
Alkali sacaton	SPAI	---	30-40	40-50	5-10	5-10
Inland saltgrass	DISPS2	---	2-5	2-5	2-8	2-8
Western wheatgrass	AGSM	---	2-5	---	---	---
Alkali cordgrass	SPGR	---	---	10-15	---	---
Baltic rush	JUBA	---	---	2-8	---	---
Sedge	CAREX	---	---	5-10	---	---
Big sagebrush	ARTR2	20-30	---	---	---	---
Rubber rabbitbrush	CHNA2	2-5	2-5	---	2-5	2-5
Black greasewood	SAVE4	30-40	5-15	---	60-75	60-75
Shadscale	ATCO	---	---	---	2-5	2-5
Range site number:		028BY028NV	028BY004NV	028BY002NV	028BY020NV	028BY020NV
Potential production (lb/acre):						
Favorable years		800	2,200	1,500	500	500
Normal years		600	1,500	1,000	300	300
Unfavorable years		400	800	700	150	150

255-Sheffit-Kunzler association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Sheffit	Sheffit, moist	Kunzler	1	2	3
Basin wildrye	ELCI2	10-20	10-20	---	---	10-20	---
Indian ricegrass	ORHY	2-10	---	---	---	5-10	10-20
Bottlebrush squirreltail	SIHY	---	2-5	5-15	---	---	2-5
Inland saltgrass	DISPS2	---	2-10	---	---	---	---
Bluegrass	POA++	---	---	5-10	---	---	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
Western wheatgrass	AGSM	---	---	---	---	---	5-15
Thelypody	THELY	---	1-2	---	---	---	---
Big sagebrush	ARTR2	20-30	---	---	---	---	---
Rubber rabbitbrush	CHNA2	2-5	---	---	---	---	---
Black greasewood	SAVE4	30-40	50-60	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	60-70	---	25-35	---
Winterfat	EULA5	---	---	---	---	---	2-5
Sickle saltbush	ATFA	---	---	---	---	---	45-55

Range site number:	028BY028NV	028BY069NV	028BY056NV	None	028BY045NV	028BY065NV
Potential production (lb/acre):						
Favorable years	800	800	450	---	1,000	700
Normal years	600	600	325	---	800	500
Unfavorable years	400	400	150	---	600	350

262-Equis silt loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name	Inclusion number--		
		Equis	1	2	3
Alkali cordgrass	SPGR	10-15	---	---	---
Alkali sacaton	SPAI	40-50	---	30-40	---
Baltic rush	JUBA	2-8	---	---	10-15
Inland saltgrass	DISPS2	2-5	2-10	2-5	---
Sedge	CAREX	5-10	---	---	20-30
Basin wildrye	ELCI2	---	10-20	30-60	---
Bottlebrush squirreltail	SIHY	---	2-5	---	---
Western wheatgrass	AGSM	---	---	2-5	---
Bluegrass	POA++	---	---	---	25-40
Thelypody	THELY	---	1-2	---	---
Cinquefoil	POTEN	---	---	---	2-5
Groundsel	SENEC	---	---	---	2-5
Black greasewood	SAVE4	---	50-60	5-15	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---

Range site number: 028BY002NV 028BY069NV 028BY004NV 028BY001NV

Potential production (lb/acre):

Favorable years	1,500	800	2,200	4,000
Normal years	1,000	600	1,500	2,000
Unfavorable years	700	400	800	1,200

266-Equis-Kolda association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Equis	Equis, wet	Kolda	1	2	3
Alkali cordgrass	SPGR	10-15	---	---	---	---	---
Alkali sacaton	SPAI	40-50	2-10	---	30-40	20-30	---
Baltic rush	JUBA	2-8	---	10-15	---	---	---
Inland saltgrass	DISPS2	2-5	20-35	---	2-5	---	---
Sedge	CAREX	5-10	10-15	20-30	---	---	2-8
Alkali bluegrass	POJU	---	2-10	---	---	---	---
Alkali muhly	MUAS	---	2-5	---	---	---	---
Western wheatgrass	AGSM	---	2-10	---	2-5	---	---
Rush	JUNCU	---	2-8	---	---	5-10	2-8
Wildrye	ELYMU	---	5-15	---	---	---	---
Bluegrass	POA++	---	---	25-40	---	---	---
Basin wildrye	ELCI2	---	---	---	30-60	2-5	---
Mat muhly	MURI	---	---	---	---	30-40	---
Bulrush	SCIRP	---	---	---	---	---	20-40
Giantreed	ARDO4	---	---	---	---	---	5-10
Cattail	TYPHA	---	---	---	---	---	20-40
Cinquefoil	POTEN	---	---	2-5	---	---	---
Groundsel	SENEC	---	---	2-5	---	---	---
Rubber rabbitbrush	CHNA2	---	---	---	2-5	5-10	---
Black greasewood	SAVE4	---	---	---	5-15	1-5	---
Basin big sagebrush	ARTRT	---	---	---	---	2-5	---
Douglas rabbitbrush	CHVI8	---	---	---	---	1-5	---

Range site number:	028BY002NV	028BY012NV	028BY001NV	028BY004NV	028BY031NV	028BY044NV
Potential production (lb/acre):						
Favorable years	1,500	1,600	4,000	2,200	1,200	4,000
Normal years	1,000	1,200	2,000	1,500	1,000	2,800
Unfavorable years	700	800	1,200	800	400	2,000

267-Equis-Devilsgait association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Equis	Devilsgait	1	2
Sedge	CAREX	10-15	2-8	20-30	5-10
Alkali bluegrass	POJU	2-10	---	---	---
Inland saltgrass	DISPS2	20-35	---	---	2-5
Alkali muhly	MUAS	2-5	---	---	---
Alkali sacaton	SPAI	2-10	---	---	40-50
Western wheatgrass	AGSM	2-10	---	---	---
Rush	JUNCU	2-8	2-8	---	---
Wildrye	ELYMU	5-15	---	---	---
Bulrush	SCIRP	---	20-40	---	---
Giantreed	ARDO4	---	5-10	---	---
Cattail	TYPHA	---	20-40	---	---
Bluegrass	POA++	---	---	25-40	---
Baltic rush	JUBA	---	---	10-15	2-8
Alkali cordgrass	SPGR	---	---	---	10-15
Cinquefoil	POTEN	---	---	2-5	---
Groundsel	SENEC	---	---	2-5	---

Range site number:	028BY012NV	028BY044NV	028BY001NV	028BY002NV
Potential production (lb/acre):				
Favorable years	1,600	4,000	4,000	1,500
Normal years	1,200	2,800	2,000	1,000
Unfavorable years	800	2,000	1,200	700

270-Atlow-Maderbak-Rubble land association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Atlow	Maderbak	Rubble land	1	2	3	4
Indian ricegrass	ORHY	20-30	15-25	---	1-5	---	20-30	5-10
Thurber needlegrass	STTH2	15-25	---	---	1-5	---	15-25	---
Needleandthread	STCO4	2-8	10-20	---	---	---	2-8	15-30
Galleta	HIJA	---	2-5	---	---	---	---	2-5
Desert needlegrass	STSP3	---	2-8	---	---	---	---	---
Bottlebrush squirreltail	SIHY	---	2-8	---	1-5	---	---	---
Bluegrass	POA++	---	---	---	1-5	---	---	---
Bluebunch wheatgrass	AGSP	---	---	---	1-5	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	---	---	2-5
Black sagebrush	ARARN	20-35	---	---	1-5	---	20-35	35-45
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---	---	---
Fourwing saltbush	ATCA2	---	2-5	---	---	---	---	---
Nevada ephedra	EPNE	---	2-5	---	---	---	---	5-10
Winterfat	EULA5	---	---	---	---	---	---	1-5
Utah juniper	JUOS	---	---	---	1-5	---	---	---
Singleleaf pinyon	PIMO	---	---	---	1-5	---	---	---

Range site number:	028BY089NV	029XY006NV	None	028BY060NV	None	028BY089NV	029XY014NV
Potential production (lb/acre):							
Favorable years	450	800	---	500	---	450	400
Normal years	300	600	---	375	---	300	275
Unfavorable years	150	300	---	250	---	150	100

271-Atlow association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Atlow, steep	Atlow, less sloping	1	2	3
Indian ricegrass	ORHY	20-30	20-30	---	15-25	5-10
Thurber needlegrass	STTH2	15-25	15-25	---	---	---
Needleandthread	STCO4	2-8	2-8	---	10-20	15-30
Galleta	HIJA	---	---	---	2-5	2-5
Desert needlegrass	STSP3	---	---	---	2-8	---
Bottlebrush squirreltail	SIHY	---	---	---	2-8	---
Sandberg bluegrass	POSE	---	---	---	---	2-5
Black sagebrush	ARARN	20-35	20-35	---	---	35-45
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---
Fourwing saltbush	ATCA2	---	---	---	2-5	---
Nevada ephedra	EPNE	---	---	---	2-5	5-10
Winterfat	EULA5	---	---	---	---	1-5

Range site number:	028BY089NV	028BY089NV	None	029XY006NV	029XY014NV
Potential production (lb/acre):					
Favorable years	450	450	---	800	400
Normal years	300	300	---	600	275
Unfavorable years	150	150	---	300	100

275-Atlow-Upatad association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Atlow, steep	Atlow, less sloping	Upatad	1	2	3	4
Indian ricegrass	ORHY	20-30	20-30	2-5	5-10	2-5	---	15-25
Thurber needlegrass	STTH2	15-25	15-25	10-20	20-40	30-40	---	---
Needleandthread	STCO4	2-8	2-8	---	5-10	2-8	---	10-20
Bluegrass	POA++	---	---	2-8	2-5	2-8	---	---
Bluebunch wheatgrass	AGSP	---	---	20-30	---	5-10	---	---
Galleta	HIJA	---	---	---	---	---	---	2-5
Desert needlegrass	STSP3	---	---	---	---	---	---	2-8
Bottlebrush squirreltail	SIHY	---	---	---	---	---	---	2-8
Crag aster	ASSC3	---	---	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	---	2-5	2-5	---	---
Arrowleaf balsamroot	BASA3	---	---	---	---	2-5	---	---
Black sagebrush	ARARN	20-35	20-35	25-35	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---	---	25-35
Spiny hopsage	GRSP	---	---	---	2-5	---	---	---
Big sagebrush	ARTR2	---	---	---	---	15-25	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	2-10	---	---
Fourwing saltbush	ATCA2	---	---	---	---	---	---	2-5
Nevada ephedra	EPNE	---	---	---	---	---	---	2-5

Range site number: 028BY089NV 028BY089NV 028BY093NV 028BY086NV 028BY007NV None 029XY006NV

Potential production (lb/acre):

Favorable years	450	450	800	800	1,000	---	800
Normal years	300	300	600	600	800	---	600
Unfavorable years	150	150	400	350	600	---	300

276-Stewval-Maderbak-Atlow association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Stewval	Maderbak	Atlow	1	2	3	4
Needleandthread	STCO4	15-30	5-10	2-8	10-20	5-10	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	---	---	---
Galleta	HIJA	2-5	2-10	---	---	---	---	---
Indian ricegrass	ORHY	5-10	5-10	20-30	10-20	5-10	---	---
Bluegrass	POA++	---	2-5	---	---	2-5	---	---
Thurber needlegrass	STTH2	---	20-30	15-25	---	20-40	---	---
Canby bluegrass	POCA	---	2-5	---	---	---	---	---
Bottlebrush squirreltail	SIHY	---	---	---	2-5	---	---	---
Crag aster	ASSC3	---	2-5	---	---	2-5	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	2-5	---	---
Black sagebrush	ARARN	35-45	---	20-35	30-40	---	---	---
Nevada ephedra	EPNE	5-10	---	---	---	---	---	---
Winterfat	EULA5	1-5	---	---	---	---	---	---
Spiny hopsage	GRSP	---	2-5	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	20-30	---	---	20-30	---	---
Bluebunch wheatgrass	AGSP	---	2-5	---	---	---	---	---
Shadscale	ATCO	---	---	---	2-5	---	---	---

Range site number: 029XY014NV 028AY022NV 028BY089NV 028BY016NV 028BY086NV None None

Potential production (lb/acre):

Favorable years	400	800	450	400	800	---	---
Normal years	275	600	300	250	600	---	---
Unfavorable years	100	350	150	100	350	---	---

279-Atlow-Broland-Yody association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Atlow	Broland	Yody	1	2
Indian ricegrass	ORHY	20-30	20-30	5-10	1-5	5-10
Thurber needlegrass	STTH2	15-25	15-25	20-40	---	---
Needleandthread	STCO4	2-8	2-8	5-10	1-5	---
Bluegrass	POA++	---	---	2-5	1-5	---
Basin wildrye	ELCI2	---	---	---	1-5	10-20
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-10
Crag aster	ASSC3	---	---	2-5	---	---
Tapertip hawksbeard	CRAC2	---	---	2-5	---	---
Thickstem cabbage	CACR11	---	---	---	1-5	---
Black sagebrush	ARARN	20-35	20-35	---	1-5	---
Wyoming big sagebrush	ARTRW	---	---	20-30	---	25-35
Spiny hopsage	GRSP	---	---	2-5	---	---
Antelope bitterbrush	PUTR2	---	---	---	1-5	---
Utah juniper	JUOS	---	---	---	1-5	---

Range site number:	028BY089NV	028BY089NV	028BY086NV	028BY083NV	028BY045NV
Potential production (lb/acre):					
Favorable years	450	450	800	175	1,000
Normal years	300	300	600	125	800
Unfavorable years	150	150	350	75	600

282-Palino very gravelly loam, 2 to 15 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Palino	1	2	3	4
Sandberg bluegrass	POSE	2-10	2-5	2-5	---	5-10
Indian ricegrass	ORHY	15-25	20-30	10-20	30-50	35-45
Needleandthread	STCO4	5-15	10-20	10-20	---	---
Bottlebrush squirreltail	SIHY	2-5	5-10	2-5	2-5	2-5
Globemallow	SPHAE	---	---	---	---	1-5
Black sagebrush	ARARN	25-35	---	30-40	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---
Rabbitbrush	CHRSY9	---	2-5	---	---	---
Shadscale	ATCO	---	---	2-5	---	20-30
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---
Bud sagebrush	ARSP5	---	---	---	2-8	---
Winterfat	EULA5	---	---	---	20-30	5-10

Range site number:	028BY011NV	028BY010NV	028BY016NV	028BY084NV	028BY075NV
Potential production (lb/acre):					
Favorable years	600	800	400	900	700
Normal years	400	600	250	700	500
Unfavorable years	250	400	100	400	300

283-Palino-Urmafot association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Palino	Urmafot	1	2	3	4
Sandberg bluegrass	POSE	2-10	---	---	2-5	---	---
Indian ricegrass	ORHY	15-25	5-15	20-30	20-30	15-25	1-5
Needleandthread	STCO4	5-15	2-5	---	10-20	---	---
Bottlebrush squirreltail	SIHY	2-5	---	---	5-10	5-10	1-5
Bluebunch wheatgrass	AGSP	---	15-30	10-15	---	---	1-5
Muttongrass	POFE	---	2-8	---	---	---	---
Bluegrass	POA++	---	---	2-8	---	---	1-5
Thurber needlegrass	STTH2	---	---	---	---	---	1-5
Globemallow	SPHAE	---	---	---	---	2-5	---
Black sagebrush	ARARN	25-35	25-35	---	---	---	1-5
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---
Shadscale	ATCO	---	2-5	---	---	---	---
Winterfat	EULA5	---	2-5	---	---	40-50	---
Big sagebrush	ARTR2	---	---	25-35	---	---	---
Antelope bitterbrush	PUTR2	---	---	1-8	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---
Bud sagebrush	ARSP5	---	---	---	---	2-8	---
Utah juniper	JUOS	---	---	---	---	---	1-5
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5

Range site number:	028BY011NV	028BY006NV	028BY094NV	028BY010NV	028BY013NV	028BY060NV
Potential production (lb/acre):						
Favorable years	600	800	800	800	700	500
Normal years	400	600	600	600	500	375
Unfavorable years	250	400	400	400	350	250

286-Palino-Shabliss association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Palino	Shabliss	1	2	3	4
Sandberg bluegrass	POSE	2-10	2-5	5-10	---	---	---
Indian ricegrass	ORHY	15-25	20-30	35-45	30-50	5-10	1-5
Needleandthread	STCO4	5-15	10-20	---	---	---	1-5
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5	---	1-5
Basin wildrye	ELCI2	---	---	---	---	10-20	1-5
Thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
Bluegrass	POA++	---	---	---	---	---	1-5
Globemallow	SPHAE	---	---	1-5	---	---	---
Thickstem cabbage	CACR11	---	---	---	---	---	1-5
Black sagebrush	ARARN	25-35	---	---	---	---	1-5
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	25-35	---
Shadscale	ATCO	---	---	20-30	---	---	---
Winterfat	EULA5	---	---	5-10	20-30	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---
Bud sagebrush	ARSP5	---	---	---	2-8	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	---	1-5
Utah juniper	JUOS	---	---	---	---	---	1-5

Range site number:	028BY011NV	028BY080NV	028BY075NV	028BY084NV	028BY045NV	028BY083NV
Potential production (lb/acre):						
Favorable years	600	600	700	900	1,000	175
Normal years	400	400	500	700	800	125
Unfavorable years	250	200	300	400	600	75

287-Palinoor-Wintermute association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Palinoor	Wintermute	1	2	3	4
Sandberg bluegrass	POSE	2-10	5-10	5-10	5-10	2-5	---
Indian ricegrass	ORHY	15-25	35-45	35-45	35-45	20-30	30-50
Needleandthread	STCO4	5-15	---	---	---	10-20	---
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5	5-10	2-5
Globemallow	SPHAE	---	1-5	1-5	1-5	---	---
Black sagebrush	ARARN	25-35	---	---	---	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---
Shadscale	ATCO	---	20-30	20-30	20-30	---	---
Winterfat	EULA5	---	5-10	5-10	5-10	---	20-30
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
Rabbitbrush	CHRSY9	---	---	---	---	2-5	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5
Bud sagebrush	ARSP5	---	---	---	---	---	2-8

Range site number: 028BY011NV 028BY075NV 028BY075NV 028BY075NV 028BY010NV 028BY084NV

Potential production (lb/acre):

Favorable years	600	700	700	700	800	900
Normal years	400	500	500	500	600	700
Unfavorable years	250	300	300	300	400	400

288-Palino-Yody-Broland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Palino	Yody	Broland	1	2	3	4
Sandberg bluegrass	POSE	2-10	---	---	---	2-5	---	---
Indian ricegrass	ORHY	15-25	5-10	20-30	30-50	20-30	2-5	30-50
Needleandthread	STCO4	5-15	5-10	2-8	---	10-20	2-8	---
Bottlebrush squirreltail	SIHY	2-5	---	---	2-5	5-10	---	2-5
Thurber needlegrass	STTH2	---	20-40	15-25	---	---	30-40	---
Bluegrass	POA++	---	2-5	---	---	---	2-8	---
Bluebunch wheatgrass	AGSP	---	---	---	---	---	5-10	---
Crag aster	ASSC3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	2-5	---
Arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
Black sagebrush	ARARN	25-35	---	20-35	---	---	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	20-30	---	---	25-35	---	---
Spiny hopsage	GRSP	---	2-5	---	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---	2-5
Bud sagebrush	ARSP5	---	---	---	2-8	---	---	2-8
Winterfat	EULA5	---	---	---	20-30	---	---	20-30
Rabbitbrush	CHRSY9	---	---	---	---	2-5	---	---
Big sagebrush	ARTR2	---	---	---	---	---	15-25	---
Antelope bitterbrush	PUTR2	---	---	---	---	---	2-10	---

Range site number: 028BY011NV 028BY086NV 028BY089NV 028BY084NV 028BY010NV 028BY007NV 028BY084NV

Potential production (lb/acre):

Favorable years	600	800	450	900	800	1,000	900
Normal years	400	600	300	700	600	800	700
Unfavorable years	250	350	150	400	400	600	400

290-Palinoir-Shabliss-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Palinoir	Shabliss	Tulase	1	2	3	4
Sandberg bluegrass	POSE	2-10	2-5	---	2-5	2-10	---	---
Indian ricegrass	ORHY	15-25	20-30	5-10	20-30	15-25	1-5	30-50
Needleandthread	STCO4	5-15	10-20	---	10-20	5-15	---	---
Bottlebrush squirreltail	SIHY	2-5	2-5	---	5-10	2-5	1-5	2-5
Basin wildrye	ELCI2	---	---	10-20	---	---	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	---	---
Bluegrass	POA++	---	---	---	---	---	1-5	---
Bluebunch wheatgrass	AGSP	---	---	---	---	---	1-5	---
Thurber needlegrass	STTH2	---	---	---	---	---	1-5	---
Black sagebrush	ARARN	25-35	---	---	---	25-35	1-5	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	25-35	25-35	25-35	---	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	2-5
Bud sagebrush	ARSP5	---	---	---	---	---	---	2-8
Winterfat	EULA5	---	---	---	---	---	---	20-30
Utah juniper	JUOS	---	---	---	---	---	1-5	---
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5	---

Range site number: 028BY011NV 028BY080NV 028BY045NV 028BY010NV 028BY011NV 028BY060NV 028BY084NV

Potential production (lb/acre):

Favorable years	600	600	1,000	800	600	500	900
Normal years	400	400	800	600	400	375	700
Unfavorable years	250	200	600	400	250	250	400

291-Urmafot-Borvant-Biken association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Urmafot	Borvant	Biken	1	2
Bluebunch wheatgrass	AGSP	15-30	1-5	---	30-40	5-10
Muttongrass	POFE	2-8	---	---	---	---
Indian ricegrass	ORHY	5-15	1-5	10-20	10-20	2-5
Bluebunch wheatgrass	AGSP	15-30	1-5	---	30-40	5-10
Needleandthread	STCO4	2-5	---	10-20	---	2-8
Canby bluegrass	POCA	---	1-5	---	---	---
Thurber needlegrass	STTH2	---	1-5	---	---	30-40
Basin wildrye	ELCI2	---	1-5	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	---	---
Bottlebrush squirreltail	SIHY	---	---	2-5	---	---
Bluegrass	POA++	---	---	---	5-10	2-8
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5
Arrowleaf balsamroot	BASA3	---	---	---	---	2-5
Black sagebrush	ARARN	25-35	---	30-40	---	---
Shadscale	ATCO	2-5	---	2-5	---	---
Winterfat	EULA5	2-5	---	---	---	---
Mountain big sagebrush	ARVA2	---	1-5	---	15-25	---
Antelope bitterbrush	PUTR2	---	---	---	5-10	2-10
Big sagebrush	ARTR2	---	---	---	---	15-25
Singleleaf pinyon	PIMO	---	1-5	---	---	---
Utah juniper	JUOS	---	1-5	---	---	---

Range site number:	028BY006NV	028BY062NV	028BY016NV	028BY079NV	028BY007NV
Potential production (lb/acre):					
Favorable years	800	700	400	700	1,000
Normal years	600	500	250	500	800
Unfavorable years	400	300	100	300	600

292-Palino-Urmafot-Urmafot, very shallow association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Palino	Urmafot	Urmafot, very shallow	1	2	3	4
Sandberg bluegrass	POSE	2-10	---	---	2-5	---	---	---
Indian ricegrass	ORHY	15-25	5-15	1-5	10-20	20-30	5-10	---
Needleandthread	STCO4	5-15	2-5	---	10-20	---	---	---
Bottlebrush squirreltail	SIHY	2-5	---	1-5	2-5	---	---	---
Bluebunch wheatgrass	AGSP	---	15-30	1-5	---	10-15	---	---
Muttongrass	POFE	---	2-8	---	---	---	---	---
Bluegrass	POA++	---	---	1-5	---	2-8	---	---
Thurber needlegrass	STTH2	---	---	1-5	---	---	---	---
Basin wildrye	ELCI2	---	---	---	---	---	10-20	70-80
Thickspike wheatgrass	AGDA	---	---	---	---	---	5-10	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	5-10
Black sagebrush	ARARN	25-35	25-35	1-5	30-40	---	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
Shadscale	ATCO	---	2-5	---	2-5	---	---	---
Winterfat	EULA5	---	2-5	---	---	---	---	---
Big sagebrush	ARTR2	---	---	---	---	25-35	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	1-8	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	---
Basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
Utah juniper	JUOS	---	---	1-5	---	---	---	---
Singleleaf pinyon	PIMO	---	---	1-5	---	---	---	---

Range site number: 028BY011NV 028BY006NV 028BY060NV 028BY016NV 028BY094NV 028BY045NV 028BY003NV

Potential production (lb/acre):

Favorable years	600	800	500	400	800	1,000	5,000
Normal years	400	600	375	250	600	800	2,500
Unfavorable years	250	400	250	100	400	600	1,500

295-Palino-Roden association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Palino	Roden	Roden, eroded	1	2	3	4
Sandberg bluegrass	POSE	2-10	2-5	---	---	2-5	2-5	2-5
Indian ricegrass	ORHY	15-25	10-20	1-5	1-5	20-30	20-30	5-10
Needleandthread	STCO4	5-15	10-20	1-5	1-5	10-20	10-20	15-30
Bottlebrush squirreltail	SIHY	2-5	2-5	1-5	1-5	5-10	5-10	---
Basin wildrye	ELCI2	---	---	1-5	1-5	---	---	---
Bluegrass	POA++	---	---	1-5	1-5	---	---	---
Galleta	HIJA	---	---	---	---	---	---	2-5
Thickstem cabbage	CACR11	---	---	1-5	1-5	---	---	---
Black sagebrush	ARARN	25-35	30-40	1-5	1-5	---	---	35-45
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
Shadscale	ATCO	---	2-5	---	---	---	---	---
Antelope bitterbrush	PUTR2	---	---	1-5	1-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	25-35	---
Rabbitbrush	CHRSY9	---	---	---	---	2-5	2-5	---
Nevada ephedra	EPNE	---	---	---	---	---	---	5-10
Winterfat	EULA5	---	---	---	---	---	---	1-5
Utah juniper	JUOS	---	---	1-5	1-5	---	---	---

Range site number: 028BY011NV 028BY016NV 028BY083NV 028BY083NV 028BY010NV 028BY010NV 029XY014NV

Potential production (lb/acre):

Favorable years	600	400	175	175	800	800	400
Normal years	400	250	125	125	600	600	275
Unfavorable years	250	100	75	75	400	400	100

296-Palino-Urmafot-Palino, steep association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Palino, less sloping	Urmafot	Palino, steep	1	2	3
Sandberg bluegrass	POSE	2-10	---	2-5	2-5	---	2-5
Indian ricegrass	ORHY	15-25	5-15	10-20	20-30	5-15	20-30
Needleandthread	STCO4	5-15	2-5	10-20	10-20	2-5	10-20
Bottlebrush squirreltail	SIHY	2-5	---	2-5	5-10	---	2-5
Bluebunch wheatgrass	AGSP	---	15-30	---	---	20-40	---
Muttongrass	POFE	---	2-8	---	---	2-5	---
Goldenweed	HAPLO2	---	---	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---
Black sagebrush	ARARN	25-35	25-35	30-40	---	25-35	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---
Shadscale	ATCO	---	2-5	2-5	---	2-5	---
Winterfat	EULA5	---	2-5	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	25-35
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---

Range site number:	028BY011NV	028BY006NV	028BY016NV	028BY010NV	028BY008NV	028BY080NV
Potential production (lb/acre):						
Favorable years	600	800	400	800	600	600
Normal years	400	600	250	600	400	400
Unfavorable years	250	400	100	400	200	200

297-Urmafot-Amelar-Izar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Urmafot	Amelar	Izar	1	2	3	4
Bluebunch wheatgrass	AGSP	15-30	30-40	---	10-15	---	1-5	20-40
Muttongrass	POFE	2-8	---	---	---	---	---	---
Indian ricegrass	ORHY	5-15	2-5	10-20	20-30	1-5	1-5	---
Bluebunch wheatgrass	AGSP	15-30	30-40	---	10-15	---	1-5	20-40
Needleandthread	STCO4	2-5	---	10-20	---	1-5	---	---
Basin wildrye	ELCI2	---	2-8	---	---	1-5	1-5	2-8
Bluegrass	POA++	---	5-10	---	2-8	1-5	---	2-5
Sandberg bluegrass	POSE	---	---	2-5	---	---	---	---
Bottlebrush squirreltail	SIHY	---	---	2-5	---	1-5	---	---
Canby bluegrass	POCA	---	---	---	---	---	1-5	---
Thurber needlegrass	STTH2	---	---	---	---	---	1-5	15-30
Thickstem cabbage	CACR11	---	---	---	---	1-5	---	---
Crag aster	ASSC3	---	---	---	---	---	---	2-5
Tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Black sagebrush	ARARN	25-35	---	30-40	---	1-5	---	---
Shadscale	ATCO	2-5	---	2-5	---	---	---	---
Winterfat	EULA5	2-5	---	---	---	---	---	---
Mountain big sagebrush	ARVA2	---	15-25	---	---	---	1-5	15-25
Antelope bitterbrush	PUTR2	---	2-10	---	1-8	1-5	---	5-10
Snowberry	SYMPH	---	2-5	---	---	---	---	---
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
Big sagebrush	ARTR2	---	---	---	25-35	---	---	---
Utah juniper	JUOS	---	---	---	---	1-5	1-5	---
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5	---

Range site number: 028BY006NV 028BY088NV 028BY016NV 028BY094NV 028BY083NV 028BY062NV 028BY087NV

Potential production (lb/acre):

Favorable years	800	1,100	400	800	175	700	900
Normal years	600	900	250	600	125	500	700
Unfavorable years	400	700	100	400	75	300	450

300-Playas-Orupa association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Playas	Orupa	1	2	3	4
Bottlebrush squirreltail	SIHY	---	2-5	---	2-5	2-5	---
Indian ricegrass	ORHY	---	5-15	---	---	2-5	2-10
Wheatgrass	AGROP2	---	20-30	---	---	---	---
Basin wildrye	ELCI2	---	---	2-5	10-20	---	10-20
Alkali sacaton	SPAI	---	---	5-10	---	---	---
Inland saltgrass	DISPS2	---	---	2-8	2-10	---	---
Thelypody	THELY	---	---	---	1-2	---	---
Winterfat	EULA5	---	40-50	---	---	---	---
Shadscale	ATCO	---	---	2-5	---	20-50	---
Black greasewood	SAVE4	---	---	60-75	50-60	20-30	30-40
Rubber rabbitbrush	CHNA2	---	---	2-5	---	---	2-5
Bud sagebrush	ARSP5	---	---	---	---	2-10	---
Big sagebrush	ARTR2	---	---	---	---	---	20-30

Range site number:	None	028BY071NV	028BY020NV	028BY069NV	028BY074NV	028BY028NV
Potential production (lb/acre):						
Favorable years	---	600	500	800	600	800
Normal years	---	400	300	600	400	600
Unfavorable years	---	200	150	400	200	400

310-Dune land-Playas association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Dune land	Playas	1	2	3
Bluegrass	POA++	---	---	5-10	---	---
Bottlebrush squirreltail	SIHY	---	---	5-15	2-5	2-5
Indian ricegrass	ORHY	---	---	---	5-15	5-15
Wheatgrass	AGROP2	---	---	---	20-30	20-30
Wyoming big sagebrush	ARTRW	---	---	60-70	---	---
Winterfat	EULA5	---	---	---	40-50	40-50
Range site number:		None	None	028BY056NV	028BY071NV	028BY071NV
Potential production (lb/acre):						
Favorable years		---	---	450	600	600
Normal years		---	---	325	400	400
Unfavorable years		---	---	150	200	200

321-Palino association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Palino, less sloping	Palino, moderately steep	1	2
Sandberg bluegrass	POSE	2-10	2-10	2-5	---
Indian ricegrass	ORHY	15-25	15-25	20-30	1-5
Needleandthread	STCO4	5-15	5-15	10-20	1-5
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	1-5
Basin wildrye	ELCI2	---	---	---	1-5
Bluegrass	POA++	---	---	---	1-5
Thickstem cabbage	CACR11	---	---	---	1-5
Black sagebrush	ARARN	25-35	25-35	---	1-5
Downy rabbitbrush	CHVIP4	2-5	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---
Antelope bitterbrush	PUTR2	---	---	---	1-5
Utah juniper	JUOS	---	---	---	1-5

Range site number:	028BY011NV	028BY011NV	028BY080NV	028BY083NV
Potential production (lb/acre):				
Favorable years	600	600	600	175
Normal years	400	400	400	125
Unfavorable years	250	250	200	75

322-Palino-Roden-Urmafot association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Palino	Roden	Urmafot	1	2
Sandberg bluegrass	POSE	2-10	---	---	2-5	---
Indian ricegrass	ORHY	15-25	1-5	5-15	20-30	1-5
Needleandthread	STCO4	5-15	1-5	2-5	10-20	---
Bottlebrush squirreltail	SIHY	2-5	1-5	---	5-10	1-5
Basin wildrye	ELCI2	---	1-5	---	---	---
Bluegrass	POA++	---	1-5	---	---	1-5
Bluebunch wheatgrass	AGSP	---	---	15-30	---	1-5
Muttongrass	POFE	---	---	2-8	---	---
Thurber needlegrass	STTH2	---	---	---	---	1-5
Thickstem cabbage	CACR11	---	1-5	---	---	---
Black sagebrush	ARARN	25-35	1-5	25-35	---	1-5
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---
Antelope bitterbrush	PUTR2	---	1-5	---	---	---
Shadscale	ATCO	---	---	2-5	---	---
Winterfat	EULA5	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---
Utah juniper	JUOS	---	1-5	---	---	1-5
Singleleaf pinyon	PIMO	---	---	---	---	1-5

Range site number:	028BY011NV	028BY083NV	028BY006NV	028BY010NV	028BY060NV
Potential production (lb/acre):					
Favorable years	600	175	800	800	500
Normal years	400	125	600	600	375
Unfavorable years	250	75	400	400	250

323-Urmafot-Bobs-Paliner association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Urmafot	Bobs	Paliner	1	2	3	4
Bluebunch wheatgrass	AGSP	15-30	10-15	---	1-5	5-10	20-40	---
Muttongrass	POFE	2-8	---	---	---	---	2-5	---
Indian ricegrass	ORHY	5-15	20-30	15-25	1-5	2-5	5-15	5-10
Bluebunch wheatgrass	AGSP	15-30	10-15	---	1-5	5-10	20-40	---
Needleandthread	STCO4	2-5	---	5-15	---	2-8	2-5	---
Bluegrass	POA++	---	2-8	---	1-5	2-8	---	---
Sandberg bluegrass	POSE	---	---	2-10	---	---	---	---
Bottlebrush squirreltail	SIHY	---	---	2-5	1-5	---	---	---
Thurber needlegrass	STTH2	---	---	---	1-5	30-40	---	---
Basin wildrye	ELCI2	---	---	---	---	---	---	10-20
Thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5	2-5	---
Arrowleaf balsamroot	BASA3	---	---	---	---	2-5	---	---
Goldenweed	HAPLO2	---	---	---	---	---	2-5	---
Black sagebrush	ARARN	25-35	---	25-35	1-5	---	25-35	---
Shadscale	ATCO	2-5	---	---	---	---	2-5	---
Winterfat	EULA5	2-5	---	---	---	---	2-5	---
Big sagebrush	ARTR2	---	25-35	---	---	15-25	---	---
Antelope bitterbrush	PUTR2	---	1-8	---	---	2-10	---	---
Downy rabbitbrush	CHVIP4	---	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	25-35
Utah juniper	JUOS	---	---	---	1-5	---	---	---
Singleleaf pinyon	PIMO	---	---	---	1-5	---	---	---

Range site number: 028BY006NV 028BY094NV 028BY011NV 028BY060NV 028BY007NV 028BY008NV 028BY045NV

Potential production (lb/acre):

Favorable years	800	800	600	500	1,000	600	1,000
Normal years	600	600	400	375	800	400	800
Unfavorable years	400	400	250	250	600	200	600

326-Palinoor-Urmafot-Roden association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Palinoor	Urmafot	Roden	1	2	3	4
Sandberg bluegrass	POSE	2-10	---	---	2-5	---	2-5	---
Indian ricegrass	ORHY	15-25	1-5	1-5	20-30	30-50	20-30	5-15
Needleandthread	STCO4	5-15	---	1-5	10-20	---	10-20	2-5
Bottlebrush squirreltail	SIHY	2-5	1-5	1-5	2-5	2-5	5-10	---
Bluegrass	POA++	---	1-5	1-5	---	---	---	---
Bluebunch wheatgrass	AGSP	---	1-5	---	---	---	---	15-30
Thurber needlegrass	STH2	---	1-5	---	---	---	---	---
Basin wildrye	ELCI2	---	---	1-5	---	---	---	---
Muttongrass	POFE	---	---	---	---	---	---	2-8
Thickstem cabbage	CACR11	---	---	1-5	---	---	---	---
Black sagebrush	ARARN	25-35	1-5	1-5	---	---	---	25-35
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
Antelope bitterbrush	PUTR2	---	---	1-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	25-35	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---	---
Bud sagebrush	ARSP5	---	---	---	---	2-8	---	---
Winterfat	EULA5	---	---	---	---	20-30	---	2-5
Rabbitbrush	CHRSY9	---	---	---	---	---	2-5	---
Shadscale	ATCO	---	---	---	---	---	---	2-5
Utah juniper	JUOS	---	1-5	1-5	---	---	---	---
Singleleaf pinyon	PIMO	---	1-5	---	---	---	---	---

Range site number: 028BY011NV 028BY060NV 028BY083NV 028BY080NV 028BY084NV 028BY010NV 028BY006NV

Potential production (lb/acre):

Favorable years	600	500	175	600	900	800	800
Normal years	400	375	125	400	700	600	600
Unfavorable years	250	250	75	200	400	400	400

327-Urmafot-Cassiro-Biken association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Urmafot	Cassiro	Biken	1	2	3	4
Bluebunch wheatgrass	AGSP	15-30	5-10	1-5	10-15	---	---	20-40
Muttongrass	POFE	2-8	---	---	---	---	---	2-5
Indian ricegrass	ORHY	5-15	2-5	1-5	20-30	1-5	---	5-15
Bluebunch wheatgrass	AGSP	15-30	5-10	1-5	10-15	---	---	20-40
Needleandthread	STCO4	2-5	2-8	---	---	1-5	---	2-5
Thurber needlegrass	STTH2	---	30-40	1-5	---	---	---	---
Bluegrass	POA++	---	2-8	1-5	2-8	1-5	---	---
Bottlebrush squirreltail	SIHY	---	---	1-5	---	1-5	---	---
Basin wildrye	ELCI2	---	---	---	---	1-5	70-80	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	2-5
Arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
Thickstem cabbage	CACR11	---	---	---	---	1-5	---	---
Goldenweed	HAPLO2	---	---	---	---	---	---	2-5
Black sagebrush	ARARN	25-35	---	1-5	---	1-5	---	25-35
Shadscale	ATCO	2-5	---	---	---	---	---	2-5
Winterfat	EULA5	2-5	---	---	---	---	---	2-5
Big sagebrush	ARTR2	---	15-25	---	25-35	---	---	---
Antelope bitterbrush	PUTR2	---	2-10	---	1-8	1-5	---	---
Basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
Utah juniper	JUOS	---	---	1-5	---	1-5	---	---
Singleleaf pinyon	PIMO	---	---	1-5	---	---	---	---

Range site number: 028BY006NV 028BY007NV 028BY060NV 028BY094NV 028BY083NV 028BY003NV 028BY008NV

Potential production (lb/acre):

Favorable years	800	1,000	500	800	175	5,000	600
Normal years	600	800	375	600	125	2,500	400
Unfavorable years	400	600	250	400	75	1,500	200

328-Urmafot-Tecomar-Pookaloo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Urmafot	Tecomar	Pookaloo	1	2	3	4
Bluebunch wheatgrass	AGSP	15-30	20-40	1-5	5-10	---	30-40	---
Muttongrass	POFE	2-8	2-5	---	---	---	---	---
Indian ricegrass	ORHY	5-15	5-15	1-5	2-5	15-25	10-20	---
Bluebunch wheatgrass	AGSP	15-30	20-40	1-5	5-10	---	30-40	---
Needleandthread	STCO4	2-5	2-5	---	2-8	5-15	---	---
Bluegrass	POA++	---	---	1-5	2-8	---	5-10	---
Bottlebrush squirreltail	SIHY	---	---	1-5	---	---	---	---
Thurber needlegrass	STTH2	---	---	1-5	30-40	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	2-10	---	---
Basin wildrye	ELCI2	---	---	---	---	---	---	70-80
Nevada bluegrass	PONE3	---	---	---	---	---	---	5-10
Goldenweed	HAPLO2	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	2-5	---	---	---
Arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
Globemallow	SPHAE	---	---	---	---	---	---	---
Black sagebrush	ARARN	25-35	25-35	1-5	---	25-35	---	---
Shadscale	ATCO	2-5	2-5	---	---	---	---	---
Winterfat	EULA5	2-5	2-5	---	---	---	---	---
Downy rabbitbrush	CHVIP4	---	---	---	---	2-5	---	---
Big sagebrush	ARTR2	---	---	---	15-25	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	2-10	---	5-10	---
Mountain big sagebrush	ARVA2	---	---	---	---	---	15-25	---
Basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
Utah juniper	JUOS	---	---	1-5	---	---	---	---
Singleleaf pinyon	PIMO	---	---	1-5	---	---	---	---

Range site number: 028BY006NV 028BY008NV 028BY060NV 028BY007NV 028BY011NV 028BY079NV 028BY003NV

Potential production (lb/acre):

Favorable years	800	600	500	1,000	600	700	5,000
Normal years	600	400	375	800	400	500	2,500
Unfavorable years	400	200	250	600	250	300	1,500

334-Parisa-Palinor-Shabliss association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Parisa	Palinor	Shabliss	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-10	2-5	---	2-5	---	2-5
Needleandthread	STCO4	10-20	5-15	10-20	---	10-20	5-10	2-10
Indian ricegrass	ORHY	20-30	15-25	20-30	5-10	20-30	15-25	2-10
Bottlebrush squirreltail	SIHY	5-10	2-5	2-5	---	5-10	2-5	2-5
Basin wildrye	ELCI2	---	---	---	10-20	---	---	---
Thickspike wheatgrass	AGDA	---	---	---	5-10	---	---	---
Scarlet globemallow	SPCO	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	25-35	25-35	25-35	---
Rabbitbrush	CHRSY9	2-5	---	---	---	2-5	---	---
Black sagebrush	ARARN	---	25-35	---	---	---	---	---
Downy rabbitbrush	CHVIP4	---	2-5	---	---	---	---	---
Spiny hopsage	GRSP	---	---	---	---	---	15-25	---
Pigmy sagebrush	ARPY2	---	---	---	---	---	---	50-70

Range site number: 028BY010NV 028BY011NV 028BY080NV 028BY045NV 028BY010NV 028BY052NV 028BY040NV

Potential production (lb/acre):

Favorable years	800	600	600	1,000	800	700	250
Normal years	600	400	400	800	600	500	175
Unfavorable years	400	250	200	600	400	400	100

336-Parisa gravelly loam, 2 to 8 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Parisa	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-10	2-5	---	5-10
Needleandthread	STCO4	10-20	5-15	10-20	---	---
Indian ricegrass	ORHY	20-30	15-25	20-30	15-25	35-45
Bottlebrush squirreltail	SIHY	5-10	2-5	5-10	2-8	2-5
Galleta	HIJA	---	---	---	5-10	---
Globemallow	SPHAE	---	---	---	---	1-5
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---
Rabbitbrush	CHRSY9	2-5	---	2-5	---	---
Black sagebrush	ARARN	---	25-35	---	---	---
Downy rabbitbrush	CHVIP4	---	2-5	---	---	---
Bailey greasewood	SAVEB	---	---	---	0-10	---
Shadscale	ATCO	---	---	---	40-50	20-30
Winterfat	EULA5	---	---	---	5-10	5-10
Bud sagebrush	ARSP5	---	---	---	5-15	---
Nevada ephedra	EPNE	---	---	---	1-5	---

Range site number:	028BY010NV	028BY011NV	028BY010NV	029XY017NV	028BY075NV
Potential production (lb/acre):					
Favorable years	800	600	800	500	700
Normal years	600	400	600	350	500
Unfavorable years	400	250	400	200	300

337-Parisa-Wintermute association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Parisa	Wintermute	1	2	3
Sandberg bluegrass	POSE	2-5	5-10	---	---	2-5
Needleandthread	STCO4	10-20	---	---	---	10-20
Indian ricegrass	ORHY	20-30	35-45	15-25	2-5	20-30
Bottlebrush squirreltail	SIHY	5-10	2-5	2-8	2-5	5-10
Galleta	HIJA	---	---	5-10	---	---
Globemallow	SPHAE	---	1-5	---	---	---
Wyoming big sagebrush	ARTRW	25-35	---	---	---	25-35
Rabbitbrush	CHRSY9	2-5	---	---	---	2-5
Shadscale	ATCO	---	20-30	40-50	20-50	---
Winterfat	EULA5	---	5-10	5-10	---	---
Bailey greasewood	SAVEB	---	---	0-10	---	---
Bud sagebrush	ARSP5	---	---	5-15	2-10	---
Nevada ephedra	EPNE	---	---	1-5	---	---
Black greasewood	SAVE4	---	---	---	20-30	---

Range site number:	028BY010NV	028BY075NV	029XY017NV	028BY074NV	028BY010NV
Potential production (lb/acre):					
Favorable years	800	700	500	600	800
Normal years	600	500	350	400	600
Unfavorable years	400	300	200	200	400

338-Parisa-Palinor-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Parisa	Palinor	Tulase	1	2
Sandberg bluegrass	POSE	2-5	2-10	---	---	---
Needleandthread	STCO4	10-20	5-15	---	5-10	---
Indian ricegrass	ORHY	20-30	15-25	5-10	5-10	---
Bottlebrush squirreltail	SIHY	5-10	2-5	---	---	5-15
Basin wildrye	ELCI2	---	---	10-20	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---
Thurber needlegrass	STTH2	---	---	---	20-40	---
Bluegrass	POA++	---	---	---	2-5	5-10
Crag aster	ASSC3	---	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	20-30	60-70
Rabbitbrush	CHRSY9	2-5	---	---	---	---
Black sagebrush	ARARN	---	25-35	---	---	---
Downy rabbitbrush	CHVIP4	---	2-5	---	---	---
Spiny hopsage	GRSP	---	---	---	2-5	---

Range site number:	028BY010NV	028BY011NV	028BY045NV	028BY086NV	028BY056NV
Potential production (lb/acre):					
Favorable years	800	600	1,000	800	450
Normal years	600	400	800	600	325
Unfavorable years	400	250	600	350	150

340-Izar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Izar, steep	Izar, less sloping	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	5-10	---	---	---
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	---	---	---
Indian ricegrass	ORHY	10-20	10-20	35-45	15-25	5-10	---
Needleandthread	STCO4	10-20	10-20	---	5-10	---	---
Bluegrass	POA++	---	---	---	2-5	---	---
Basin wildrye	ELCI2	---	---	---	---	10-20	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
Globemallow	SPHAE	---	---	1-5	2-5	---	---
Black sagebrush	ARARN	30-40	30-40	---	15-25	---	---
Shadscale	ATCO	2-5	2-5	20-30	---	---	---
Winterfat	EULA5	---	---	5-10	---	---	---
Spiny hopsage	GRSP	---	---	---	20-30	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---

Range site number:	028BY016NV	028BY016NV	028BY075NV	028BY053NV	028BY045NV	None
Potential production (lb/acre):						
Favorable years	400	400	700	600	1,000	---
Normal years	250	250	500	400	800	---
Unfavorable years	100	100	300	200	600	---

346-Izar-Roden-Zerk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Izar	Roden	Zerk	1	2	3	4
Sandberg bluegrass	POSE	2-10	2-5	5-10	---	2-5	---	2-5
Indian ricegrass	ORHY	15-25	10-20	35-45	10-20	10-20	---	20-30
Needleandthread	STCO4	5-15	10-20	---	---	10-20	---	10-20
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	5-15	2-5	---	5-10
Globemallow	SPHAE	---	---	1-5	2-5	---	---	---
Black sagebrush	ARARN	25-35	30-40	---	---	30-40	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
Shadscale	ATCO	---	2-5	20-30	40-50	2-5	---	---
Winterfat	EULA5	---	---	5-10	---	---	---	---
Bud sagebrush	ARSP5	---	---	---	10-15	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	25-35
Rabbitbrush	CHRSY9	---	---	---	---	---	---	2-5

Range site number: 028BY011NV 028BY016NV 028BY075NV 028BY017NV 028BY016NV None 028BY010NV

Potential production (lb/acre):

Favorable years	600	400	700	700	400	---	800
Normal years	400	250	500	400	250	---	600
Unfavorable years	250	100	300	250	100	---	400

351-Heist-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Heist	Tulase	1	2
Indian ricegrass	ORHY	30-50	5-10	20-30	20-30
Bottlebrush squirreltail	SIHY	2-5	---	5-10	2-5
Basin wildrye	ELCI2	---	10-20	---	---
Thickspike wheatgrass	AGDA	---	5-10	---	---
Sandberg bluegrass	POSE	---	---	2-5	2-5
Needleandthread	STCO4	---	---	10-20	10-20
Douglas rabbitbrush	CHVI8	2-5	---	---	---
Bud sagebrush	ARSP5	2-8	---	---	---
Winterfat	EULA5	20-30	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	25-35	25-35
Rabbitbrush	CHRSY9	---	---	2-5	---

Range site number: 028BY084NV 028BY045NV 028BY010NV 028BY080NV

Potential production (lb/acre):

Favorable years	900	1,000	800	600
Normal years	700	800	600	400
Unfavorable years	400	600	400	200

353-Heist silt loam, 0 to 4 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Heist	1	2	3	4
Indian ricegrass	ORHY	30-50	15-25	20-30	5-10	15-25
Bottlebrush squirreltail	SIHY	2-5	5-10	5-10	---	2-5
Sandberg bluegrass	POSE	---	---	2-5	---	---
Needleandthread	STCO4	---	---	10-20	---	---
Basin wildrye	ELCI2	---	---	---	10-20	---
Thickspike wheatgrass	AGDA	---	---	---	5-10	---
Bluegrass	POA++	---	---	---	---	2-5
wheatgrass	AGROP2	---	---	---	---	5-10
Globemallow	SPHAE	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	2-5
Bud sagebrush	ARSP5	2-8	2-8	---	---	---
Winterfat	EULA5	20-30	40-50	---	---	15-30
Wyoming big sagebrush	ARTRW	---	---	25-35	25-35	30-35
Rabbitbrush	CHRSY9	---	---	2-5	---	---

Range site number: 028BY084NV 028BY013NV 028BY010NV 028BY045NV 028BY054NV

Potential production (lb/acre):

Favorable years	900	700	800	1,000	600
Normal years	700	500	600	800	450
Unfavorable years	400	350	400	600	200

356-Heist-Wintermute association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Heist	Wintermute	1	2	3	4
Indian ricegrass	ORHY	30-50	35-45	30-50	35-45	2-5	35-45
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5	2-5	2-5
Sandberg bluegrass	POSE	---	5-10	---	5-10	---	5-10
Globemallow	SPHAE	---	1-5	---	1-5	---	1-5
Douglas rabbitbrush	CHVI8	2-5	---	2-5	---	---	---
Bud sagebrush	ARSP5	2-8	---	2-8	---	2-10	---
Winterfat	EULA5	20-30	5-10	20-30	5-10	---	5-10
Shadscale	ATCO	---	20-30	---	20-30	20-50	20-30
Black greasewood	SAVE4	---	---	---	---	20-30	---

Range site number:	028BY084NV	028BY075NV	028BY084NV	028BY075NV	028BY074NV	028BY075NV
Potential production (lb/acre):						
Favorable years	900	700	900	700	600	700
Normal years	700	500	700	500	400	500
Unfavorable years	400	300	400	300	200	300

360-Belmill association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Belmill, gently sloping	Belmill, steeper	1	2	3	4
Indian ricegrass	ORHY	5-10	---	20-30	5-15	2-5	1-5
Thurber needlegrass	STTH2	20-40	15-30	---	---	30-40	1-5
Needleandthread	STCO4	5-10	---	---	2-5	2-8	---
Bluegrass	POA++	2-5	2-5	2-8	---	2-8	1-5
Bluebunch wheatgrass	AGSP	---	20-40	10-15	15-30	5-10	1-5
Basin wildrye	ELCI2	---	2-8	---	---	---	---
Muttongrass	POFE	---	---	---	2-8	---	---
Bottlebrush squirreltail	SIHY	---	---	---	---	---	1-5
Crag aster	ASSC3	2-5	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	2-5	---	---	2-5	---
Arrowleaf balsamroot	BASA3	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	20-30	---	---	---	---	---
Spiny hopsage	GRSP	2-5	---	---	---	---	---
Mountain big sagebrush	ARVA2	---	15-25	---	---	---	---
Antelope bitterbrush	PUTR2	---	5-10	1-8	---	2-10	---
Big sagebrush	ARTR2	---	---	25-35	---	15-25	---
Black sagebrush	ARARN	---	---	---	25-35	---	1-5
Shadscale	ATCO	---	---	---	2-5	---	---
Winterfat	EULA5	---	---	---	2-5	---	---
Utah juniper	JUOS	---	---	---	---	---	1-5
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5

Range site number:	028BY086NV	028BY087NV	028BY094NV	028BY006NV	028BY007NV	028BY060NV
Potential production (lb/acre):						
Favorable years	800	900	800	800	1,000	500
Normal years	600	700	600	600	800	375
Unfavorable years	350	450	400	400	600	250

361-Belmill-Cowgil-Selti association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Belmill	Cowgil	Selti	1	2
Indian ricegrass	ORHY	5-10	20-30	2-5	20-30	5-10
Thurber needlegrass	STTH2	20-40	---	30-40	15-25	20-40
Needleandthread	STCO4	5-10	10-20	2-8	2-8	5-10
Bluegrass	POA++	2-5	---	2-8	---	2-5
Sandberg bluegrass	POSE	---	2-5	---	---	---
Bottlebrush squirreltail	SIHY	---	5-10	---	---	---
Bluebunch wheatgrass	AGSP	---	---	5-10	---	---
Crag aster	ASSC3	2-5	---	---	---	2-5
Tapertip hawksbeard	CRAC2	2-5	---	2-5	---	2-5
Arrowleaf balsamroot	BASA3	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	20-30	25-35	---	---	20-30
Spiny hopsage	GRSP	2-5	---	---	---	2-5
Rabbitbrush	CHRSY9	---	2-5	---	---	---
Big sagebrush	ARTR2	---	---	15-25	---	---
Antelope bitterbrush	PUTR2	---	---	2-10	---	---
Black sagebrush	ARARN	---	---	---	20-35	---

Range site number:	028BY086NV	028BY010NV	028BY007NV	028BY089NV	028BY086NV
Potential production (lb/acre):					
Favorable years	800	800	1,000	450	800
Normal years	600	600	800	300	600
Unfavorable years	350	400	600	150	350

372-Automal gravelly silt loam, 2 to 4 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name	Inclusion number--		
		Automal	1	2	3
Sandberg bluegrass	POSE	2-10	---	2-10	---
Indian ricegrass	ORHY	15-25	20-30	15-25	30-50
Needleandthread	STCO4	5-15	2-8	5-15	---
Bottlebrush squirreltail	SIHY	2-5	---	2-5	2-5
Thurber needlegrass	STTH2	---	15-25	---	---
Black sagebrush	ARARN	25-35	20-35	25-35	---
Downy rabbitbrush	CHVIP4	2-5	---	2-5	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5
Bud sagebrush	ARSP5	---	---	---	2-8
Winterfat	EULA5	---	---	---	20-30

Range site number: 028BY011NV 028BY089NV 028BY011NV 028BY084NV

Potential production (lb/acre):

Favorable years	600	450	600	900
Normal years	400	300	400	700
Unfavorable years	250	150	250	400

373-Automal-Wintermute association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Automal	Wintermute	1	2	3	4
Sandberg bluegrass	POSE	2-10	5-10	---	---	---	---
Indian ricegrass	ORHY	15-25	35-45	30-50	5-15	10-20	15-25
Needleandthread	STCO4	5-15	---	---	2-5	---	5-10
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	---	5-15	2-5
Bluebunch wheatgrass	AGSP	---	---	---	15-30	---	---
Muttongrass	POFE	---	---	---	2-8	---	---
Globemallow	SPHAE	---	1-5	---	---	2-5	---
Scarlet globemallow	SPCO	---	---	---	---	---	2-5
Black sagebrush	ARARN	25-35	---	---	25-35	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---
Shadscale	ATCO	---	20-30	---	2-5	40-50	---
Winterfat	EULA5	---	5-10	20-30	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---	---
Bud sagebrush	ARSP5	---	---	2-8	---	10-15	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35
Spiny hopsage	GRSP	---	---	---	---	---	15-25

Range site number:	028BY011NV	028BY075NV	028BY084NV	028BY006NV	028BY017NV	028BY052NV
Potential production (lb/acre):						
Favorable years	600	700	900	800	700	700
Normal years	400	500	700	600	400	500
Unfavorable years	250	300	400	400	250	400

380-Palino-Parisa association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Palino	Parisa	1	2	3
Sandberg bluegrass	POSE	2-10	2-5	---	---	---
Indian ricegrass	ORHY	15-25	20-30	1-5	20-30	5-15
Needleandthread	STCO4	5-15	10-20	---	---	2-5
Bottlebrush squirreltail	SIHY	2-5	5-10	1-5	---	---
Bluegrass	POA++	---	---	1-5	2-8	---
Bluebunch wheatgrass	AGSP	---	---	1-5	10-15	15-30
Thurber needlegrass	STTH2	---	---	1-5	---	---
Muttongrass	POFE	---	---	---	---	2-8
Black sagebrush	ARARN	25-35	---	1-5	---	25-35
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---
Rabbitbrush	CHRSY9	---	2-5	---	---	---
Big sagebrush	ARTR2	---	---	---	25-35	---
Antelope bitterbrush	PUTR2	---	---	---	1-8	---
Shadscale	ATCO	---	---	---	---	2-5
Winterfat	EULA5	---	---	---	---	2-5
Utah juniper	JUOS	---	---	1-5	---	---
Singleleaf pinyon	PIMO	---	---	1-5	---	---

Range site number:	028BY011NV	028BY010NV	028BY060NV	028BY094NV	028BY006NV
Potential production (lb/acre):					
Favorable years	600	800	500	800	800
Normal years	400	600	375	600	600
Unfavorable years	250	400	250	400	400

411-Cassiro association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Cassiro, moist	Cassiro	1	2	3	4
Basin wildrye	ELCI2	2-10	---	---	---	70-80	---
Bluebunch wheatgrass	AGSP	30-40	5-10	30-40	---	---	20-30
Thurber needlegrass	STTH2	10-20	30-40	---	---	---	---
Bluegrass	POA++	2-8	2-8	5-10	---	---	2-10
Indian ricegrass	ORHY	---	2-5	10-20	---	---	---
Needleandthread	STCO4	---	2-8	---	---	---	---
Sedge	CAREX	---	---	---	20-30	---	---
Alpine timothy	PHAL2	---	---	---	2-5	---	---
Rush	JUNCU	---	---	---	2-8	---	---
Tufted hairgrass	DECE	---	---	---	30-40	---	---
Meadow barley	HOBR2	---	---	---	2-5	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---
Arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---
Antelope bitterbrush	PUTR2	2-10	2-10	5-10	---	---	2-5
Mountain big sagebrush	ARVA2	20-25	---	15-25	---	---	---
Big sagebrush	ARTR2	---	15-25	---	---	---	---
Silver sagebrush	ARCA13	---	---	---	2-8	---	---
Basin big sagebrush	ARTRT	---	---	---	---	5-10	---
Low sagebrush	ARAR8	---	---	---	---	---	25-35

Range site number:	028BY030NV	028BY007NV	028BY079NV	028BY022NV	028BY003NV	028BY037NV
Potential production (lb/acre):						
Favorable years	1,500	1,000	700	3,200	5,000	800
Normal years	1,200	800	500	2,000	2,500	600
Unfavorable years	900	600	300	1,400	1,500	400

413-Cassiro-Fax-Belmill association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Cassiro	Fax	Belmill	1	2	3	4
Bluebunch wheatgrass	AGSP	10-20	---	20-40	20-30	30-40	---	10-25
Indian ricegrass	ORHY	2-5	5-10	---	---	---	5-10	---
Needlegrass	STIPA	5-10	---	---	---	---	---	---
Bluegrass	POA++	2-8	2-5	2-5	2-10	2-8	2-5	2-10
Thurber needlegrass	STTH2	---	20-40	15-30	---	10-20	20-40	5-15
Needleandthread	STCO4	---	5-10	---	---	---	5-10	---
Basin wildrye	ELCI2	---	---	2-8	---	2-10	---	---
Crag aster	ASSC3	---	2-5	2-5	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	2-5	2-5	---	---	2-5	---
Mountain big sagebrush	ARVA2	5-15	---	15-25	---	20-25	---	---
Antelope bitterbrush	PUTR2	30-45	---	5-10	2-5	2-10	---	1-10
Wyoming big sagebrush	ARTRW	---	20-30	---	---	---	20-30	---
Spiny hopsage	GRSP	---	2-5	---	---	---	2-5	---
Low sagebrush	ARAR8	---	---	---	25-35	---	---	25-35

Range site number: 028BY046NV 028BY086NV 028BY087NV 028BY037NV 028BY030NV 028BY086NV 028BY039NV

Potential production (lb/acre):

Favorable years	1,200	800	900	800	1,500	800	500
Normal years	900	600	700	600	1,200	600	350
Unfavorable years	700	350	450	400	900	350	200

414-Cassiro-Belmill association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Cassiro	Belmill	1	2
Bluebunch wheatgrass	AGSP	5-10	---	20-40	30-40
Thurber needlegrass	STTH2	30-40	20-40	15-30	10-20
Bluegrass	POA++	2-8	2-5	2-5	2-8
Indian ricegrass	ORHY	2-5	5-10	---	---
Needleandthread	STCO4	2-8	5-10	---	---
Basin wildrye	ELCI2	---	---	2-8	2-10
Tapertip hawksbeard	CRAC2	2-5	2-5	2-5	---
Arrowleaf balsamroot	BASA3	2-5	---	---	---
Crag aster	ASSC3	---	2-5	2-5	---
Big sagebrush	ARTR2	15-25	---	---	---
Antelope bitterbrush	PUTR2	2-10	---	5-10	2-10
Wyoming big sagebrush	ARTRW	---	20-30	---	---
Spiny hopsage	GRSP	---	2-5	---	---
Mountain big sagebrush	ARVA2	---	---	15-25	20-25

Range site number:	028BY007NV	028BY086NV	028BY087NV	028BY030NV
Potential production (lb/acre):				
Favorable years	1,000	800	900	1,500
Normal years	800	600	700	1,200
Unfavorable years	600	350	450	900

421-Wintermute gravelly sandy loam, 0 to 4 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name	Inclusion number--		
		Wintermute	1	2	3
Indian ricegrass	ORHY	35-45	5-10	30-50	10-20
Bottlebrush squirreltail	SIHY	2-5	---	2-5	5-15
Sandberg bluegrass	POSE	5-10	---	---	---
Basin wildrye	ELCI2	---	10-20	---	---
Thickspike wheatgrass	AGDA	---	5-10	---	---
Bluegrass	POA++	---	---	---	---
Needlegrass	STIPA	---	---	---	---
Globemallow	SPHAE	1-5	---	---	---
Shadscale	ATCO	20-30	---	---	40-50
Winterfat	EULA5	5-10	---	20-30	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---
Bud sagebrush	ARSP5	---	---	2-8	10-15

Range site number: 028BY075NV 028BY045NV 028BY084NV 028BY017NV

Potential production (lb/acre):

Favorable years	700	1,000	900	700
Normal years	500	800	700	400
Unfavorable years	300	600	400	250

425-Wintermute association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Wintermute	Wintermute, gravelly	1	2	3
Indian ricegrass	ORHY	10-20	35-45	2-10	15-25	---
Bottlebrush squirreltail	SIHY	5-15	2-5	---	2-5	5-15
Sandberg bluegrass	POSE	---	5-10	---	2-10	---
Basin wildrye	ELCI2	---	---	10-20	---	---
Needleandthread	STCO4	---	---	---	5-15	---
Bluegrass	POA++	---	---	---	---	5-10
Globemallow	SPHAE	2-5	1-5	---	---	---
Shadscale	ATCO	40-50	20-30	---	---	---
Bud sagebrush	ARSP5	10-15	---	---	---	---
Winterfat	EULA5	---	5-10	---	---	---
Big sagebrush	ARTR2	---	---	20-30	---	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---	---
Black greasewood	SAVE4	---	---	30-40	---	---
Black sagebrush	ARARN	---	---	---	25-35	---
Downy rabbitbrush	CHVIP4	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	60-70

Range site number:	028BY017NV	028BY075NV	028BY028NV	028BY011NV	028BY056NV
Potential production (lb/acre):					
Favorable years	700	700	800	600	450
Normal years	400	500	600	400	325
Unfavorable years	250	300	400	250	150

434-Pookaloo-Hyzen association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pookaloo	Hyzen	Hyzen, dry	1	2	3	4
Bluegrass	POA++	1-5	1-5	---	---	---	---	---
Indian ricegrass	ORHY	1-5	1-5	2-5	1-5	---	2-5	---
Bottlebrush squirreltail	SIHY	1-5	1-5	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	1-5	---	1-5	---	10-20	1-5
Thurber needlegrass	STTH2	1-5	1-5	---	1-5	---	---	---
Scribner needlegrass	STSC2	---	---	2-10	---	---	---	---
Canby bluegrass	POCA	---	---	---	1-5	---	---	---
Basin wildrye	ELCI2	---	---	---	1-5	---	---	---
Needlegrass	STIPA	---	---	---	---	---	5-10	---
Muttongrass	POFE	---	---	---	---	---	2-8	1-5
Spike-fescue	LEKI2	---	---	---	---	---	---	1-5
Goldenweed	HAPLO2	---	---	5-10	---	---	---	1-5
Creeping barberry	BERE	---	---	---	---	---	---	1-5
Black sagebrush	ARARN	1-5	1-5	2-8	---	---	---	---
Littleleaf mountainmahogany	CEIN7	---	---	60-70	---	---	---	---
Desert snowberry	SYLO	---	---	2-8	---	---	---	---
Mountain big sagebrush	ARVA2	---	---	---	1-5	---	15-25	1-5
Snowberry	SYMPH	---	---	---	---	---	2-8	---
Common juniper	JUCO6	---	---	---	---	---	---	1-5
Limber pine	PIFL2	---	---	---	---	---	---	1-5
White fir	ABCO	---	---	---	---	---	---	1-5
Bristlecone pine	PIAR	---	---	---	---	---	---	1-5
Utah juniper	JUOS	1-5	1-5	1-3	1-5	---	---	---
Singleleaf pinyon	PIMO	1-5	1-5	---	1-5	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	---	---	---	30-50	---

Range site number:	028BY060NV	028BY060NV	028BY066NV	028BY062NV	None	028BY032NV	028BY063NV
Potential production (lb/acre):							
Favorable years	500	500	1,300	700	---	1,300	400
Normal years	375	375	1,000	500	---	900	275
Unfavorable years	250	250	800	300	---	600	150

436-Pookaloo-Hyzen-Cavehill association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pookaloo	Hyzen	Cavehill	1	2	3	4
Bluegrass	POA++	1-5	1-5	---	---	---	5-10	2-8
Indian ricegrass	ORHY	1-5	1-5	1-5	---	---	10-20	20-30
Bottlebrush squirreltail	SIHY	1-5	1-5	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	1-5	1-5	1-5	---	30-40	10-15
Thurber needlegrass	STTH2	1-5	1-5	1-5	---	---	---	---
Canby bluegrass	POCA	---	---	1-5	1-5	---	---	---
Basin wildrye	ELCI2	---	---	1-5	1-5	---	---	---
Muttongrass	POFE	---	---	---	1-5	---	---	---
Black sagebrush	ARARN	1-5	1-5	---	---	---	---	---
Mountain big sagebrush	ARVA2	---	---	1-5	1-5	---	15-25	---
Serviceberry	AMELA	---	---	---	1-5	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	1-5	---	5-10	1-8
Snowberry	SYMPH	---	---	---	1-5	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	---	1-5	---	---	---
Big sagebrush	ARTR2	---	---	---	---	---	---	25-35
Utah juniper	JUOS	1-5	1-5	1-5	---	---	---	---
Singleleaf pinyon	PIMO	1-5	1-5	1-5	1-5	---	---	---

Range site number:	028BY060NV	028BY060NV	028BY062NV	028BY058NV	None	028BY079NV	028BY094NV
Potential production (lb/acre):							
Favorable years	500	500	700	500	---	700	800
Normal years	375	375	500	375	---	500	600
Unfavorable years	250	250	300	250	---	300	400

437-Pookaloo-Urmafot-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pookaloo	Urmafot	Tulase	1	2	3	4
Bluegrass	POA++	1-5	---	---	1-5	---	5-10	1-5
Indian ricegrass	ORHY	1-5	5-15	5-10	1-5	---	2-5	1-5
Bottlebrush squirreltail	SIHY	1-5	---	---	1-5	---	---	1-5
Bluebunch wheatgrass	AGSP	1-5	15-30	---	1-5	20-30	30-40	1-5
Thurber needlegrass	STTH2	1-5	---	---	1-5	---	---	1-5
Muttongrass	POFE	---	2-8	---	---	---	---	---
Needleandthread	STCO4	---	2-5	---	---	---	---	---
Basin wildrye	ELCI2	---	---	10-20	---	---	2-8	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	---	---
Black sagebrush	ARARN	1-5	25-35	---	1-5	---	---	1-5
Shadscale	ATCO	---	2-5	---	---	---	---	---
Winterfat	EULA5	---	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---	---	---
Snowberry	SYMPH	---	---	---	---	2-8	2-5	---
Mountain big sagebrush	ARVA2	---	---	---	---	15-25	15-25	---
Antelope bitterbrush	PUTR2	---	---	---	---	---	2-10	---
Utah serviceberry	AMUT	---	---	---	---	---	1-5	---
Utah juniper	JUOS	1-5	---	---	1-5	---	---	1-5
Singleleaf pinyon	PIMO	1-5	---	---	1-5	---	---	1-5
Curlleaf mountainmahogany	CELE3	---	---	---	---	15-25	---	---

Range site number: 028BY060NV 028BY006NV 028BY045NV 028BY060NV 028BY043NV 028BY088NV 028BY060NV

Potential production (lb/acre):

Favorable years	500	800	1,000	500	1,700	1,100	500
Normal years	375	600	800	375	1,300	900	375
Unfavorable years	250	400	600	250	900	700	250

440-Hessing-Zerk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Hessing	Zerk	1	2	3	4
Indian ricegrass	ORHY	10-20	35-45	20-30	30-50	1-5	30-50
Bottlebrush squirreltail	SIHY	5-15	2-5	5-10	2-5	5-10	2-5
Sandberg bluegrass	POSE	---	5-10	2-5	---	---	---
Needleandthread	STCO4	---	---	10-20	---	---	---
Globemallow	SPHAE	2-5	1-5	---	---	---	---
Shadscale	ATCO	40-50	20-30	---	---	70-90	---
Bud sagebrush	ARSP5	10-15	---	---	2-8	---	2-8
Winterfat	EULA5	---	5-10	---	20-30	---	20-30
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---	---
Rabbitbrush	CHRSY9	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	2-5

Range site number: 028BY017NV 028BY075NV 028BY010NV 028BY084NV 028BY073NV 028BY084NV

Potential production (lb/acre):

Favorable years	700	700	800	900	500	900
Normal years	400	500	600	700	400	700
Unfavorable years	250	300	400	400	300	400

450-Shabliss-Yody association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Shabliss	Yody	1	2	3	4
Needleandthread	STCO4	10-20	5-10	5-15	---	1-5	5-10
Sandberg bluegrass	POSE	2-5	---	2-10	2-5	---	---
Indian ricegrass	ORHY	20-30	5-10	15-25	15-25	1-5	15-25
Bottlebrush squirreltail	SIHY	2-5	---	2-5	2-8	1-5	2-5
Thurber needlegrass	STTH2	---	20-40	---	---	---	---
Bluegrass	POA++	---	2-5	---	---	1-5	---
wheatgrass	AGROP2	---	---	---	5-10	---	---
Basin wildrye	ELCI2	---	---	---	---	1-5	---
Crag aster	ASSC3	---	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---
Thickstem cabbage	CACR11	---	---	---	---	1-5	---
Scarlet globemallow	SPCO	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	25-35	20-30	---	30-40	---	25-35
Spiny hopsage	GRSP	---	2-5	---	---	---	15-25
Black sagebrush	ARARN	---	---	25-35	---	1-5	---
Downy rabbitbrush	CHVIP4	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---
Winterfat	EULA5	---	---	---	5-15	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	1-5	---
Utah juniper	JUOS	---	---	---	---	1-5	---

Range site number:	028BY080NV	028BY086NV	028BY011NV	028BY014NV	028BY083NV	028BY052NV
Potential production (lb/acre):						
Favorable years	600	800	600	600	175	700
Normal years	400	600	400	450	125	500
Unfavorable years	200	350	250	200	75	400

455-Shabliss-Tulase-Linoyer association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Shabliss	Tulase	Linoyer	1	2	3
Needleandthread	STCO4	10-20	---	---	10-20	---	---
Sandberg bluegrass	POSE	2-5	---	---	2-5	2-5	---
Indian ricegrass	ORHY	20-30	5-10	15-25	20-30	15-25	30-50
Bottlebrush squirreltail	SIHY	2-5	---	5-10	5-10	2-8	2-5
Basin wildrye	ELCI2	---	10-20	---	---	---	---
Thickspike wheatgrass	AGDA	---	5-10	---	---	---	---
Wheatgrass	AGROP2	---	---	---	---	5-10	---
Globemallow	SPHAE	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	25-35	30-40	---
Winterfat	EULA5	---	---	40-50	---	5-15	20-30
Bud sagebrush	ARSP5	---	---	2-8	---	---	2-8
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	2-5

Range site number:	028BY080NV	028BY045NV	028BY013NV	028BY010NV	028BY014NV	028BY084NV
Potential production (lb/acre):						
Favorable years	600	1,000	700	800	600	900
Normal years	400	800	500	600	450	700
Unfavorable years	200	600	350	400	200	400

458-Shabliss-Pyrat-Palinor association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name			Inclusion number--
		Shabliss	Pyrat	Palinor	1
Needleandthread	STCO4	10-20	10-20	5-15	---
Sandberg bluegrass	POSE	2-5	2-5	2-10	---
Indian ricegrass	ORHY	20-30	20-30	15-25	2-10
Bottlebrush squirreltail	SIHY	2-5	5-10	2-5	---
Basin wildrye	ELCI2	---	---	---	10-20
Wyoming big sagebrush	ARTRW	25-35	25-35	---	---
Rabbitbrush	CHRSY9	---	2-5	---	---
Black sagebrush	ARARN	---	---	25-35	---
Downy rabbitbrush	CHVIP4	---	---	2-5	---
Big sagebrush	ARTR2	---	---	---	20-30
Rubber rabbitbrush	CHNA2	---	---	---	2-5
Black greasewood	SAVE4	---	---	---	30-40

Range site number:	028BY080NV	028BY010NV	028BY011NV	028BY028NV
Potential production (lb/acre):				
Favorable years	600	800	600	800
Normal years	400	600	400	600
Unfavorable years	200	400	250	400

471-Hessing-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Hessing	Tulase	1	2	3
Indian ricegrass	ORHY	35-45	5-10	20-30	20-40	30-50
Bottlebrush squirreltail	SIHY	2-5	---	5-10	---	2-5
Sandberg bluegrass	POSE	5-10	---	2-5	---	---
Basin wildrye	ELCI2	---	10-20	---	---	---
Thickspike wheatgrass	AGDA	---	5-10	---	---	---
Needleandthread	STCO4	---	---	10-20	2-5	---
Dropseed	SPORO	---	---	---	2-5	---
Galleta	HIJA	---	---	---	2-5	---
Globemallow	SPHAE	1-5	---	---	2-5	---
Shadscale	ATCO	20-30	---	---	15-30	---
Winterfat	EULAS	5-10	---	---	5-10	20-30
Wyoming big sagebrush	ARTRW	---	25-35	25-35	---	---
Rabbitbrush	CHRSY9	---	---	2-5	---	---
Bud sagebrush	ARSP5	---	---	---	2-5	2-8
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5

Range site number: 028BY075NV 028BY045NV 028BY010NV 029XY090NV 028BY084NV

Potential production (lb/acre):

Favorable years	700	1,000	800	700	900
Normal years	500	800	600	500	700
Unfavorable years	300	600	400	300	400

472-Broyles-Blimo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Broyles	Blimo	1	2	3
Indian ricegrass	ORHY	10-20	15-25	20-30	---	15-25
Bottlebrush squirreltail	SIHY	5-15	2-8	10-20	5-15	5-10
Wheatgrass	AGROP2	---	5-10	---	---	---
Sandberg bluegrass	POSE	---	2-5	---	---	---
Bluegrass	POA++	---	---	---	5-10	---
Globemallow	SPHAE	2-5	---	2-5	---	2-5
Shadscale	ATCO	40-50	---	50-60	---	---
Bud sagebrush	ARSP5	10-15	---	---	---	2-8
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---
Winterfat	EULAS	---	5-15	---	---	40-50
Wyoming big sagebrush	ARTRW	---	30-40	---	60-70	---

Range site number:	028BY017NV	028BY014NV	028BY009NV	028BY056NV	028BY013NV
Potential production (lb/acre):					
Favorable years	700	600	500	450	700
Normal years	400	450	400	325	500
Unfavorable years	250	200	300	150	350

473-Broyles-Sheffit-Katelana association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Broyles	Sheffit	Katelana	1	2	3	4
Indian ricegrass	ORHY	10-20	2-10	2-5	---	1-5	5-10	35-45
Bottlebrush squirreltail	SIHY	5-15	---	2-5	5-15	5-10	---	2-5
Basin wildrye	ELCI2	---	10-20	---	---	---	2-5	---
Bluegrass	POA++	---	---	---	5-10	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	---	---	5-10
Globemallow	SPHAE	2-5	---	---	---	---	---	1-5
Shadscale	ATCO	40-50	---	20-50	---	70-90	5-10	20-30
Bud sagebrush	ARSP5	10-15	---	2-10	---	---	---	---
Big sagebrush	ARTR2	---	20-30	---	---	---	---	---
Rubber rabbitbrush	CHNA2	---	2-5	---	---	---	---	---
Black greasewood	SAVE4	---	30-40	20-30	---	---	40-60	---
Wyoming big sagebrush	ARTRW	---	---	---	60-70	---	---	---
Fourwing saltbush	ATCA2	---	---	---	---	---	5-10	---
Winterfat	EULA5	---	---	---	---	---	---	5-10

Range site number: 028BY017NV 028BY028NV 028BY074NV 028BY056NV 028BY073NV 028BY021NV 028BY075NV

Potential production (lb/acre):

Favorable years	700	800	600	450	500	400	700
Normal years	400	600	400	325	400	300	500
Unfavorable years	250	400	200	150	300	200	300

480-Pioche-Cropper association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Pioche	Cropper	1	2	3
Canby bluegrass	POCA	1-5	1-5	---	---	---
Bluebunch wheatgrass	AGSP	1-5	1-5	1-5	30-40	---
Indian ricegrass	ORHY	1-5	---	1-5	---	---
Thurber needlegrass	STTH2	1-5	---	1-5	---	---
Basin wildrye	ELCI2	1-5	1-5	---	2-8	---
Muttongrass	POFE	---	1-5	---	---	---
Bluegrass	POA++	---	---	1-5	2-8	---
Bottlebrush squirreltail	SIHY	---	---	1-5	---	---
Needlegrass	STIPA	---	---	---	5-15	---
Arrowleaf balsamroot	BASA3	---	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	2-5	---
Mountain big sagebrush	ARVA2	1-5	1-5	---	15-20	---
Serviceberry	AMELA	---	1-5	---	---	---
Antelope bitterbrush	PUTR2	---	1-5	---	2-8	---
Snowberry	SYMPH	---	1-5	---	5-10	---
Curleaf mountainmahogany	CELE3	---	1-5	---	---	---
Black sagebrush	ARARN	---	---	1-5	---	---
Utah serviceberry	AMUT	---	---	---	5-10	---
Singleleaf pinyon	PIMO	1-5	1-5	1-5	---	---
Utah juniper	JUOS	1-5	---	1-5	---	---

Range site number:	028BY062NV	028BY058NV	028BY060NV	028BY015NV	None
Potential production (lb/acre):					
Favorable years	700	500	500	1,500	---
Normal years	500	375	375	1,100	---
Unfavorable years	300	250	250	700	---

481-Pioche-Segura-Cropper association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pioche	Segura	Cropper	1	2	3	4
Canby bluegrass	POCA	1-5	---	1-5	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	20-40	1-5	1-5	20-30	5-10	---
Indian ricegrass	ORHY	1-5	---	---	1-5	2-5	2-5	---
Thurber needlegrass	STTH2	1-5	15-30	---	1-5	10-20	30-40	---
Basin wildrye	ELCI2	1-5	2-8	1-5	---	---	---	---
Bluegrass	POA++	---	2-5	---	1-5	2-8	2-8	---
Muttongrass	POFE	---	---	1-5	---	---	---	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	---	---
Needleandthread	STCO4	---	---	---	---	---	2-8	---
Crag aster	ASSC3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	2-5	---
Arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
Mountain big sagebrush	ARVA2	1-5	15-25	1-5	---	---	---	---
Antelope bitterbrush	PUTR2	---	5-10	1-5	---	---	2-10	---
Serviceberry	AMELA	---	---	1-5	---	---	---	---
Snowberry	SYMPH	---	---	1-5	---	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	1-5	---	---	---	---
Black sagebrush	ARARN	---	---	---	1-5	25-35	---	---
Big sagebrush	ARTR2	---	---	---	---	---	15-25	---
Singleleaf pinyon	PIMO	1-5	---	1-5	1-5	---	---	---
Utah juniper	JUOS	1-5	---	---	1-5	---	---	---

Range site number:	028BY062NV	028BY087NV	028BY058NV	028BY060NV	028BY093NV	028BY007NV	None
Potential production (lb/acre):							
Favorable years	700	900	500	500	800	1,000	---
Normal years	500	700	375	375	600	800	---
Unfavorable years	300	450	250	250	400	600	---

483-Pioche-Upatad-Birchcreek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pioche	Upatad	Birchcreek	1	2	3	4
Canby bluegrass	POCA	1-5	---	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	20-30	10-20	---	20-40	5-10	---
Indian ricegrass	ORHY	1-5	2-5	2-5	20-30	---	2-5	---
Thurber needlegrass	STTH2	1-5	10-20	---	15-25	15-30	30-40	---
Basin wildrye	ELCI2	1-5	---	---	---	2-8	---	---
Bluegrass	POA++	---	2-8	2-8	---	2-5	2-8	---
Needlegrass	STIPA	---	---	5-10	---	---	---	---
Needleandthread	STCO4	---	---	---	2-8	---	2-8	---
Crag aster	ASSC3	---	---	---	---	2-5	---	---
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5	2-5	---
Arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
Mountain big sagebrush	ARVA2	1-5	---	5-15	---	15-25	---	---
Black sagebrush	ARARN	---	25-35	---	20-35	---	---	---
Antelope bitterbrush	PUTR2	---	---	30-45	---	5-10	2-10	---
Big sagebrush	ARTR2	---	---	---	---	---	15-25	---
Singleleaf pinyon	PIMO	1-5	---	---	---	---	---	---
Utah juniper	JUOS	1-5	---	---	---	---	---	---

Range site number: 028BY062NV 028BY093NV 028BY046NV 028BY089NV 028BY087NV 028BY007NV None

Potential production (lb/acre):

Favorable years	700	800	1,200	450	900	1,000	---
Normal years	500	600	900	300	700	800	---
Unfavorable years	300	400	700	150	450	600	---

484-Pioche-Birchcreek-Cropper association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pioche	Birchcreek	Cropper	1	2	3	4
Canby bluegrass	POCA	1-5	---	1-5	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	10-20	1-5	20-30	10-20	5-10	---
Indian ricegrass	ORHY	1-5	2-5	---	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	1-5	---	---	10-20	---	30-40	---
Basin wildrye	ELCI2	1-5	---	1-5	---	---	---	---
Needlegrass	STIPA	---	5-10	---	---	5-10	---	---
Bluegrass	POA++	---	2-8	---	2-8	2-8	2-8	---
Muttongrass	POFE	---	---	1-5	---	---	---	---
Needleandthread	STCO4	---	---	---	---	---	2-8	---
Tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
Arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
Mountain big sagebrush	ARVA2	1-5	5-15	1-5	---	5-15	---	---
Antelope bitterbrush	PUTR2	---	30-45	1-5	---	30-45	2-10	---
Serviceberry	AMELA	---	---	1-5	---	---	---	---
Snowberry	SYMPH	---	---	1-5	---	---	---	---
Curleaf mountainmahogany	CELE3	---	---	1-5	---	---	---	---
Black sagebrush	ARARN	---	---	---	25-35	---	---	---
Big sagebrush	ARTR2	---	---	---	---	---	15-25	---
Singleleaf pinyon	PIMO	1-5	---	1-5	---	---	---	---
Utah juniper	JUOS	1-5	---	---	---	---	---	---

Range site number: 028BY062NV 028BY046NV 028BY058NV 028BY093NV 028BY046NV 028BY007NV None

Potential production (lb/acre):

Favorable years	700	1,200	500	800	1,200	1,000	---
Normal years	500	900	375	600	900	800	---
Unfavorable years	300	700	250	400	700	600	---

486--Pioche-Cropper-Upatad association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pioche	Cropper	Upatad	1	2	3	4
Canby bluegrass	POCA	1-5	1-5	---	---	---	---	1-5
Bluebunch wheatgrass	AGSP	1-5	1-5	20-30	1-5	20-40	20-40	1-5
Indian ricegrass	ORHY	1-5	---	2-5	1-5	---	---	1-5
Thurber needlegrass	STTH2	1-5	---	10-20	1-5	15-30	15-30	1-5
Basin wildrye	ELCI2	1-5	1-5	---	---	2-8	2-8	1-5
Muttongrass	POFE	---	1-5	---	---	---	---	---
Bluegrass	POA++	---	---	2-8	1-5	2-5	2-5	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	---	---
Crag aster	ASSC3	---	---	---	---	2-5	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5	2-5	---
Mountain big sagebrush	ARVA2	1-5	1-5	---	---	15-25	15-25	1-5
Serviceberry	AMELA	---	1-5	---	---	---	---	---
Antelope bitterbrush	PUTR2	---	1-5	---	---	5-10	5-10	---
Snowberry	SYMPH	---	1-5	---	---	---	---	---
Curleaf mountainmahogany	CELE3	---	1-5	---	---	---	---	---
Black sagebrush	ARARN	---	---	25-35	1-5	---	---	---
Singleleaf pinyon	PIMO	1-5	1-5	---	1-5	---	---	1-5
Utah juniper	JUOS	1-5	---	---	1-5	---	---	1-5

Range site number: 028BY062NV 028BY058NV 028BY093NV 028BY060NV 028BY087NV 028BY087NV 028BY062NV

Potential production (lb/acre):

Favorable years	700	500	800	500	900	900	700
Normal years	500	375	600	375	700	700	500
Unfavorable years	300	250	400	250	450	450	300

489-Pioche-McIvey-Birchcreek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Pioche	McIvey	Birchcreek	1	2
Canby bluegrass	POCA	1-5	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	20-40	10-20	---	20-40
Indian ricegrass	ORHY	1-5	---	2-5	---	---
Thurber needlegrass	STTH2	1-5	15-30	---	---	15-30
Basin wildrye	ELCI2	1-5	2-8	---	---	2-8
Bluegrass	POA++	---	2-5	2-8	---	2-5
Needlegrass	STIPA	---	---	5-10	---	---
Crag aster	ASSC3	---	2-5	---	---	2-5
Tapertip hawksbeard	CRAC2	---	2-5	---	---	2-5
Mountain big sagebrush	ARVA2	1-5	15-25	5-15	---	15-25
Antelope bitterbrush	PUTR2	---	5-10	30-45	---	5-10
Singleleaf pinyon	PIMO	1-5	---	---	---	---
Utah juniper	JUOS	1-5	---	---	---	---

Range site number:	028BY062NV	028BY087NV	028BY046NV	None	028BY087NV
Potential production (lb/acre):					
Favorable years	700	900	1,200	---	900
Normal years	500	700	900	---	700
Unfavorable years	300	450	700	---	450

490-Kunzler loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions	
		Soil name	Inclusion number--
		Kunzler	1
Basin wildrye	ELCI2	10-20	10-20
Indian ricegrass	ORHY	2-10	2-10
Big sagebrush	ARTR2	20-30	20-30
Rubber rabbitbrush	CHNA2	2-5	2-5
Black greasewood	SAVE4	30-40	30-40

Range site number: 028BY028NV 028BY028NV

Potential production (lb/acre):

Favorable years	800	800
Normal years	600	600
Unfavorable years	400	400

491-Kunzler-Katelana association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Kunzler	Katelana	1	2	3	4
Basin wildrye	ELCI2	10-20	---	10-20	30-60	---	2-5
Indian ricegrass	ORHY	2-10	2-5	2-10	---	2-5	---
Bottlebrush squirreltail	SIHY	---	2-5	---	---	2-5	---
Alkali sacaton	SPAI	---	---	---	30-40	---	5-10
Inland saltgrass	DISPS2	---	---	---	2-5	---	2-8
Western wheatgrass	AGSM	---	---	---	2-5	---	---
Big sagebrush	ARTR2	20-30	---	20-30	---	---	---
Rubber rabbitbrush	CHNA2	2-5	---	2-5	2-5	---	2-5
Black greasewood	SAVE4	30-40	20-30	30-40	5-15	20-30	60-75
Shadscale	ATCO	---	20-50	---	---	20-50	2-5
Bud sagebrush	ARSP5	---	2-10	---	---	2-10	---

Range site number:	028BY028NV	028BY074NV	028BY028NV	028BY004NV	028BY074NV	028BY020NV
Potential production (lb/acre):						
Favorable years	800	600	800	2,200	600	500
Normal years	600	400	600	1,500	400	300
Unfavorable years	400	200	400	800	200	150

500-Segura-McIvey-Hutchley association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Segura	McIvey	Hutchley	1	2	3	4
Basin wildrye	ELCI2	2-10	2-10	---	---	2-10	---	---
Idaho fescue	FEID	15-25	15-40	---	---	---	---	---
Bluebunch wheatgrass	AGSP	2-10	15-30	20-40	20-40	30-40	---	---
Mountain brome	BRCA5	2-10	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	2-5	---	---	---	---	---
Bulbous oniongrass	MEBU	---	1-5	---	---	---	---	---
Thurber needlegrass	STTH2	---	1-10	10-15	---	10-20	---	---
Pine needlegrass	STPI2	---	---	2-8	---	---	---	---
Bluegrass	POA++	---	---	5-10	---	2-8	2-10	---
Needlegrass	STIPA	---	---	---	15-25	---	---	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	---	---
Letterman needlegrass	STLE4	---	---	---	---	---	50-70	---
Tapertip hawksbeard	CRAC2	2-5	1-5	---	---	---	---	---
Phlox	PHLOX	2-5	---	---	---	---	---	---
Arrowleaf balsamroot	BASA3	2-5	5-10	---	---	---	---	---
Goldenweed	HAPLO2	---	---	2-5	---	---	---	---
Lupine	LUPIN	---	---	---	---	---	2-8	---
Penstemon	PENST	---	---	---	---	---	2-5	---
Mountain big sagebrush	ARVA2	5-15	---	---	---	20-25	---	---
Serviceberry	AMELA	2-5	---	---	---	---	---	---
Antelope bitterbrush	PUTR2	2-10	5-15	---	25-45	2-10	---	---
Utah serviceberry	AMUT	2-5	---	---	---	---	---	---
Big sagebrush	ARTR2	---	10-15	---	---	---	---	---
Sagebrush	ARTEM	---	---	30-40	---	---	---	---
Low sagebrush	ARAR8	---	---	---	10-20	---	---	---
Snowberry	SYMPH	---	---	---	1-5	---	---	---

Range site number: 025XY042NV 025XY012NV 028BY034NV 028BY035NV 028BY030NV 028BY051NV None

Potential production (lb/acre):

Favorable years	500	1,200	400	1,200	1,500	700	---
Normal years	400	900	250	1,000	1,200	500	---
Unfavorable years	250	600	150	800	900	300	---

510-Onkeyo-Cavehill-Pookaloo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Onkeyo	Cavehill	Pookaloo	1	2	3	4
Bluegrass	POA++	5-10	---	1-5	---	2-8	---	---
Indian ricegrass	ORHY	10-20	1-5	1-5	---	---	---	---
Bluebunch wheatgrass	AGSP	30-40	1-5	1-5	60-80	30-40	20-30	---
Canby bluegrass	POCA	---	1-5	---	5-15	---	---	---
Thurber needlegrass	STTH2	---	1-5	1-5	---	10-20	---	---
Basin wildrye	ELCI2	---	1-5	---	---	2-10	---	---
Bottlebrush squirreltail	SIHY	---	---	1-5	---	---	---	---
Spike-fescue	LEKI2	---	---	---	1-10	---	---	---
Antelope bitterbrush	PUTR2	5-10	---	---	---	2-10	---	---
Mountain big sagebrush	ARVA2	15-25	1-5	---	10-20	20-25	15-25	---
Black sagebrush	ARARN	---	---	1-5	---	---	---	---
Snowberry	SYMPH	---	---	---	2-8	---	2-8	---
Singleleaf pinyon	PIMO	---	1-5	1-5	---	---	---	---
Utah juniper	JUOS	---	1-5	1-5	---	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	---	---	---	15-25	---

Range site number:	028BY079NV	028BY062NV	028BY060NV	028BY070NV	028BY030NV	028BY043NV	None
Potential production (lb/acre):							
Favorable years	700	700	500	1,100	1,500	1,700	---
Normal years	500	500	375	900	1,200	1,300	---
Unfavorable years	300	300	250	600	900	900	---

520-McIvey-Pioche association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		McIvey	Pioche	1	2	3	4
Bluegrass	POA++	2-8	---	2-8	2-10	---	2-5
Needlegrass	STIPA	5-15	---	---	---	---	---
Bluebunch wheatgrass	AGSP	30-40	1-5	30-40	20-30	---	20-40
Basin wildrye	ELCI2	2-8	1-5	2-10	---	70-80	2-8
Canby bluegrass	POCA	---	1-5	---	---	---	---
Indian ricegrass	ORHY	---	1-5	---	---	---	---
Thurber needlegrass	STTH2	---	1-5	10-20	---	---	15-30
Nevada bluegrass	PONE3	---	---	---	---	5-10	---
Arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	---	2-5
Crag aster	ASSC3	---	---	---	---	---	2-5
Snowberry	SYMPH	5-10	---	---	---	---	---
Utah serviceberry	AMUT	5-10	---	---	---	---	---
Mountain big sagebrush	ARVA2	15-20	1-5	20-25	---	---	15-25
Antelope bitterbrush	PUTR2	2-8	---	2-10	2-5	---	5-10
Low sagebrush	ARAR8	---	---	---	25-35	---	---
Basin big sagebrush	ARTRT	---	---	---	---	5-10	---
Singleleaf pinyon	PIMO	---	1-5	---	---	---	---
Utah juniper	JUOS	---	1-5	---	---	---	---

Range site number:	028BY015NV	028BY062NV	028BY030NV	028BY037NV	028BY003NV	028BY087NV
Potential production (lb/acre):						
Favorable years	1,500	700	1,500	800	5,000	900
Normal years	1,100	500	1,200	600	2,500	700
Unfavorable years	700	300	900	400	1,500	450

531-Duffer-Uwell association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Duffer	Uwell	1	2	3
Alkali sacaton	SPAI	30-40	---	---	---	---
Inland saltgrass	DISPS2	2-5	---	---	---	---
Western wheatgrass	AGSM	2-5	---	---	---	---
Basin wildrye	ELCI2	30-60	10-20	---	10-20	70-80
Indian ricegrass	ORHY	---	5-10	20-30	2-10	---
Thickspike wheatgrass	AGDA	---	5-10	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	---	---
Needleandthread	STCO4	---	---	10-20	---	---
Bottlebrush squirreltail	SIHY	---	---	5-10	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10
Rubber rabbitbrush	CHNA2	2-5	---	---	2-5	---
Black greasewood	SAVE4	5-15	---	---	30-40	---
Wyoming big sagebrush	ARTRW	---	25-35	25-35	---	---
Rabbitbrush	CHRSY9	---	---	2-5	---	---
Big sagebrush	ARTR2	---	---	---	20-30	---
Basin big sagebrush	ARTRT	---	---	---	---	5-10

Range site number:	028BY004NV	028BY045NV	028BY010NV	028BY028NV	028BY003NV
Potential production (lb/acre):					
Favorable years	2,200	1,000	800	800	5,000
Normal years	1,500	800	600	600	2,500
Unfavorable years	800	600	400	400	1,500

534-Duffer-Kolda association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Duffer	Duffer, moist	Kolda	1	2
Alkali sacaton	SPAI	30-40	40-50	---	---	5-10
Inland saltgrass	DISPS2	2-5	2-5	---	---	2-8
Western wheatgrass	AGSM	2-5	---	---	---	---
Basin wildrye	ELCI2	30-60	---	---	10-20	2-5
Alkali cordgrass	SPGR	---	10-15	---	---	---
Baltic rush	JUBA	---	2-8	10-15	---	---
Sedge	CAREX	---	5-10	20-30	---	---
Bluegrass	POA++	---	---	25-40	---	---
Indian ricegrass	ORHY	---	---	---	2-10	---
Cinquefoil	POTEN	---	---	2-5	---	---
Groundsel	SENEC	---	---	2-5	---	---
Rubber rabbitbrush	CHNA2	2-5	---	---	2-5	2-5
Black greasewood	SAVE4	5-15	---	---	30-40	60-75
Big sagebrush	ARTR2	---	---	---	20-30	---
Shadscale	ATCO	---	---	---	---	2-5

Range site number:	028BY004NV	028BY002NV	028BY001NV	028BY028NV	028BY020NV
Potential production (lb/acre):					
Favorable years	2,200	1,500	4,000	800	500
Normal years	1,500	1,000	2,000	600	300
Unfavorable years	800	700	1,200	400	150

540-Kolda-Sheffit-Equis association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name			Inclusion number--
		Kolda	Sheffit	Equis	1
Sedge	CAREX	20-30	---	5-10	---
Bluegrass	POA++	25-40	---	---	---
Baltic rush	JUBA	10-15	---	2-8	---
Basin wildrye	ELCI2	---	10-20	---	2-5
Indian ricegrass	ORHY	---	2-10	---	---
Alkali cordgrass	SPGR	---	---	10-15	---
Alkali sacaton	SPAI	---	---	40-50	5-10
Inland saltgrass	DISPS2	---	---	2-5	2-8
Cinquefoil	POTEN	2-5	---	---	---
Groundsel	SENEC	2-5	---	---	---
Big sagebrush	ARTR2	---	20-30	---	---
Rubber rabbitbrush	CHNA2	---	2-5	---	2-5
Black greasewood	SAVE4	---	30-40	---	60-75
Shadscale	ATCO	---	---	---	2-5

Range site number:	028BY001NV	028BY028NV	028BY002NV	028BY020NV
Potential production (lb/acre):				
Favorable years	4,000	800	1,500	500
Normal years	2,000	600	1,000	300
Unfavorable years	1,200	400	700	150

541-Kolda-Duffer association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Kolda	Duffer	1	2	3
Sedge	CAREX	20-30	5-10	20-30	---	---
Bluegrass	POA++	25-40	---	25-40	---	---
Baltic rush	JUBA	10-15	2-8	10-15	---	---
Alkali cordgrass	SPGR	---	10-15	---	---	---
Alkali sacaton	SPAI	---	40-50	---	5-10	30-40
Inland saltgrass	DISPS2	---	2-5	---	2-8	2-5
Basin wildrye	ELCI2	---	---	---	2-5	30-60
Western wheatgrass	AGSM	---	---	---	---	2-5
Cinquefoil	POTEN	2-5	---	2-5	---	---
Groundsel	SENEC	2-5	---	2-5	---	---
Shadscale	ALCO	---	---	---	2-5	---
Black greasewood	SAVE4	---	---	---	60-75	5-15
Rubber rabbitbrush	CHNA2	---	---	---	2-5	2-5

Range site number: 028BY001NV 028BY002NV 028BY001NV 028BY020NV 028BY004NV

Potential production (lb/acre):

Favorable years	4,000	1,500	4,000	500	2,200
Normal years	2,000	1,000	2,000	300	1,500
Unfavorable years	1,200	700	1,200	150	800

542-Devilsgait-Duffer association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Devilsgait	Devilsgait, wet	Duffer	1	2
Sedge	CAREX	20-30	2-8	5-10	5-10	---
Bluegrass	POA++	25-40	---	---	---	---
Baltic rush	JUBA	10-15	---	2-8	2-8	---
Bulrush	SCIRP	---	20-40	---	---	---
Rush	JUNCU	---	2-8	---	---	---
Giantreed	ARDO4	---	5-10	---	---	---
Cattail	TYPHA	---	20-40	---	---	---
Alkali cordgrass	SPGR	---	---	10-15	10-15	---
Alkali sacaton	SPAI	---	---	40-50	40-50	30-40
Inland saltgrass	DISPS2	---	---	2-5	2-5	2-5
Western wheatgrass	AGSM	---	---	---	---	2-5
Basin wildrye	ELCI2	---	---	---	---	30-60
Cinquefoil	POTEN	2-5	---	---	---	---
Groundsel	SENEC	2-5	---	---	---	---
Rubber rabbitbrush	CHNA2	---	---	---	---	2-5
Black greasewood	SAVE4	---	---	---	---	5-15

Range site number:	028BY001NV	028BY044NV	028BY002NV	028BY002NV	028BY004NV
Potential production (lb/acre):					
Favorable years	4,000	4,000	1,500	1,500	2,200
Normal years	2,000	2,800	1,000	1,000	1,500
Unfavorable years	1,200	2,000	700	700	800

550-Molion-Unsel-Breko association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Molion	Unsel	Breko	1	2
Galleta	HIJA	2-8	5-10	2-5	---	2-5
Needleandthread	STCO4	5-15	---	10-20	---	2-5
Desert needlegrass	STSP3	2-5	---	2-8	---	---
Indian ricegrass	ORHY	15-25	15-25	15-25	30-50	50-70
Sandberg bluegrass	POSE	2-5	---	---	---	---
Bottlebrush squirreltail	SIHY	1-5	2-8	2-8	2-5	---
Sand dropseed	SPCR	---	---	---	---	5-15
Black sagebrush	ARARN	25-35	---	---	---	---
Nevada ephedra	EPNE	2-5	1-5	2-5	---	---
Winterfat	EULA5	2-5	5-10	---	20-30	2-5
Bailey greasewood	SAVEB	---	0-10	---	---	---
Shadscale	ATCO	---	40-50	---	---	---
Bud sagebrush	ARSP5	---	5-15	---	2-8	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---
Fourwing saltbush	ATCA2	---	---	2-5	---	10-20
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---

Range site number: 029XY008NV 029XY017NV 029XY006NV 028BY084NV 029XY012NV

Potential production (lb/acre):

Favorable years	700	500	800	900	700
Normal years	500	350	600	700	500
Unfavorable years	250	200	300	400	300

552-Molion very gravelly sandy loam, 2 to 8 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Molion	1	2	3	4
Sandberg bluegrass	POSE	2-10	2-5	5-10	---	---
Indian ricegrass	ORHY	15-25	20-30	35-45	30-50	15-25
Needleandthread	STCO4	5-15	10-20	---	---	10-20
Bottlebrush squirreltail	SIHY	2-5	5-10	2-5	2-5	2-8
Galleta	HIJA	---	---	---	---	2-5
Desert needlegrass	STSP3	---	---	---	---	2-8
Globemallow	SPHAE	---	---	1-5	---	---
Black sagebrush	ARARN	25-35	---	---	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	25-35
Rabbitbrush	CHRSY9	---	2-5	---	---	---
Shadscale	ATCO	---	---	20-30	---	---
Winterfat	EULA5	---	---	5-10	20-30	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---
Bud sagebrush	ARSP5	---	---	---	2-8	---
Fourwing saltbush	ATCA2	---	---	---	---	2-5
Nevada ephedra	EPNE	---	---	---	---	2-5

Range site number: 028BY011NV 028BY010NV 028BY075NV 028BY084NV 029XY006NV

Potential production (lb/acre):

Favorable years	600	800	700	900	800
Normal years	400	600	500	700	600
Unfavorable years	250	400	300	400	300

561-McIvey-Pioche-Upatad association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		McIvey	Pioche	Upatad	1	2	3
Bluegrass	POA++	2-8	---	2-8	---	1-5	2-8
Needlegrass	STIPA	5-15	---	---	---	---	---
Bluebunch wheatgrass	AGSP	30-40	1-5	20-30	---	1-5	30-40
Basin wildrye	ELCI2	2-8	1-5	---	---	---	2-10
Canby bluegrass	POCA	---	1-5	---	---	---	---
Indian ricegrass	ORHY	---	1-5	2-5	20-30	1-5	---
Thurber needlegrass	STTH2	---	1-5	10-20	15-25	1-5	10-20
Needleandthread	STCO4	---	---	---	2-8	---	---
Bottlebrush squirreltail	SIHY	---	---	---	---	1-5	---
Arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---
Snowberry	SYMPH	5-10	---	---	---	---	---
Utah serviceberry	AMUT	5-10	---	---	---	---	---
Mountain big sagebrush	ARVA2	15-20	1-5	---	---	---	20-25
Antelope bitterbrush	PUTR2	2-8	---	---	---	---	2-10
Black sagebrush	ARARN	---	---	25-35	20-35	1-5	---
Singleleaf pinyon	PIMO	---	1-5	---	---	1-5	---
Utah juniper	JUOS	---	1-5	---	---	1-5	---

Range site number:	028BY015NV	028BY062NV	028BY093NV	028BY089NV	028BY060NV	028BY030NV
Potential production (lb/acre):						
Favorable years	1,500	700	800	450	500	1,500
Normal years	1,100	500	600	300	375	1,200
Unfavorable years	700	300	400	150	250	900

564-McIvey-Chen-Suak association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		McIvey	Chen	Suak	1	2	3	4
Bluegrass	POA++	2-8	2-10	---	2-8	---	---	---
Needlegrass	STIPA	5-15	---	5-10	---	---	---	---
Bluebunch wheatgrass	AGSP	30-40	10-25	10-20	30-40	---	---	---
Basin wildrye	ELCI2	2-8	---	---	2-10	---	---	60-70
Thurber needlegrass	STTH2	---	5-15	---	10-20	---	---	---
Indian ricegrass	ORHY	---	---	2-5	---	---	---	---
Muttongrass	POFE	---	---	2-8	---	---	---	---
Columbia needlegrass	STNE3	---	---	---	---	---	2-8	---
Slender wheatgrass	AGTR	---	---	---	---	---	2-8	---
Mountain brome	BRCA5	---	---	---	---	---	15-20	---
Letterman needlegrass	STLE4	---	---	---	---	---	15-20	---
Spike-fescue	LEKI2	---	---	---	---	---	5-10	---
Sedge	CAREX	---	---	---	---	---	2-5	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	5-10
Wheatgrass	AGROP2	---	---	---	---	---	---	5-10
Arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
Snowberry	SYMPH	5-10	---	2-8	---	---	2-5	---
Utah serviceberry	AMUT	5-10	---	---	---	---	---	---
Mountain big sagebrush	ARVA2	15-20	---	15-25	20-25	---	15-25	5-15
Antelope bitterbrush	PUTR2	2-8	1-10	---	2-10	---	---	---
Low sagebrush	ARAR8	---	25-35	---	---	---	---	---
willow	SALIX	---	---	---	---	---	---	2-5
Curleaf mountainmahogany	CELE3	---	---	30-50	---	---	---	---

Range site number:	028BY015NV	028BY039NV	028BY032NV	028BY030NV	None	028BY029NV	028BY024NV
Potential production (lb/acre):							
Favorable years	1,500	500	1,300	1,500	---	1,700	5,000
Normal years	1,100	350	900	1,200	---	1,200	2,500
Unfavorable years	700	200	600	900	---	900	1,500

566-McIvey-Segura-Cropper association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		McIvey	Segura	Cropper	1	2
Basin wildrye	ELCI2	2-10	2-8	1-5	---	---
Bluebunch wheatgrass	AGSP	30-40	20-40	1-5	---	10-20
Thurber needlegrass	STTH2	10-20	15-30	---	---	---
Bluegrass	POA++	2-8	2-5	---	---	---
Muttongrass	POFE	---	---	1-5	---	2-8
Canby bluegrass	POCA	---	---	1-5	---	---
Indian ricegrass	ORHY	---	---	---	---	2-5
Needlegrass	STIPA	---	---	---	---	5-10
Crag aster	ASSC3	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---
Antelope bitterbrush	PUTR2	2-10	5-10	1-5	---	---
Mountain big sagebrush	ARVA2	20-25	15-25	1-5	---	15-25
Serviceberry	AMELA	---	---	1-5	---	---
Snowberry	SYMPH	---	---	1-5	---	2-8
Curleaf mountainmahogany	CELE3	---	---	1-5	---	30-50
Singleleaf pinyon	PIMO	---	---	1-5	---	---
Range site number:		028BY030NV	028BY087NV	028BY058NV	None	028BY032NV
Potential production (lb/acre):						
Favorable years		1,500	900	500	---	1,300
Normal years		1,200	700	375	---	900
Unfavorable years		900	450	250	---	600

567-McIvey-Birchcreek-Hutchley association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		McIvey	Birchcreek	Hutchley	1	2	3	4
Needlegrass	STIPA	5-15	5-10	---	5-15	---	5-10	---
Bluebunch wheatgrass	AGSP	10-20	10-20	20-40	30-40	---	10-20	20-40
Bluegrass	POA++	2-8	2-8	5-10	2-8	---	---	5-10
Indian ricegrass	ORHY	---	2-5	---	---	---	2-5	---
Pine needlegrass	STPI2	---	---	2-8	---	---	---	2-8
Thurber needlegrass	STTH2	---	---	10-15	---	---	---	10-15
Basin wildrye	ELCI2	---	---	---	2-8	---	---	---
Muttongrass	POFE	---	---	---	---	---	2-8	---
Goldenweed	HAPLO2	---	---	2-5	---	---	---	2-5
Arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---	---
Mountain big sagebrush	ARVA2	5-15	5-15	---	15-20	---	15-25	---
Snowberry	SYMPH	2-8	---	---	5-10	---	2-8	---
Utah serviceberry	AMUT	35-45	---	---	5-10	---	---	---
Antelope bitterbrush	PUTR2	---	30-45	---	2-8	---	---	---
Sagebrush	ARTEM	---	---	30-40	---	---	---	30-40
Curlleaf mountainmahogany	CELE3	---	---	---	---	---	30-50	---

Range site number:	028BY026NV	028BY046NV	028BY034NV	028BY015NV	None	028BY032NV	028BY034NV
Potential production (lb/acre):							
Favorable years	1,200	1,200	400	1,500	---	1,300	400
Normal years	900	900	250	1,100	---	900	250
Unfavorable years	700	700	150	700	---	600	150

570-Yody-Blimo-McConnel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Yody	Blimo	McConnel	1	2
Indian ricegrass	ORHY	5-10	15-25	20-30	20-30	10-20
Thurber needlegrass	STTH2	20-40	---	---	---	---
Needleandthread	STCO4	5-10	---	10-20	10-20	---
Bluegrass	POA++	2-5	---	---	---	---
wheatgrass	AGROP2	---	5-10	---	---	---
Bottlebrush squirreltail	SIHY	---	2-8	5-10	5-10	5-15
Sandberg bluegrass	POSE	---	2-5	2-5	2-5	---
Crag aster	ASSC3	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	---
Globemallow	SPHAE	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	20-30	30-40	25-35	25-35	---
Spiny hopsage	GRSP	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---
Winterfat	EULA5	---	5-15	---	---	---
Rabbitbrush	CHRSY9	---	---	2-5	2-5	---
Shadscale	ATCO	---	---	---	---	40-50
Bud sagebrush	ARSP5	---	---	---	---	10-15

Range site number:	028BY086NV	028BY014NV	028BY010NV	028BY010NV	028BY017NV
Potential production (lb/acre):					
Favorable years	800	600	800	800	700
Normal years	600	450	600	600	400
Unfavorable years	350	200	400	400	250

573-Yody-Palinor-Shabliss association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Yody	Palinor	Shabliss	1	2
Indian ricegrass	ORHY	5-10	15-25	20-30	15-25	30-50
Thurber needlegrass	STTH2	20-40	---	---	---	---
Needleandthread	STCO4	5-10	5-15	10-20	---	---
Bluegrass	POA++	2-5	---	---	---	---
Sandberg bluegrass	POSE	---	2-10	2-5	2-5	---
Bottlebrush squirreltail	SIHY	---	2-5	2-5	2-8	2-5
Wheatgrass	AGROP2	---	---	---	5-10	---
Crag aster	ASSC3	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	20-30	---	25-35	30-40	---
Spiny hopsage	GRSP	2-5	---	---	---	---
Black sagebrush	ARARN	---	25-35	---	---	---
Downy rabbitbrush	CHVIP4	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	2-5
Winterfat	EULA5	---	---	---	5-15	20-30
Bud sagebrush	ARSP5	---	---	---	---	2-8

Range site number:	028BY086NV	028BY011NV	028BY080NV	028BY014NV	028BY084NV
Potential production (lb/acre):					
Favorable years	800	600	600	600	900
Normal years	600	400	400	450	700
Unfavorable years	350	250	200	200	400

575-Yody-Broyles association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Yody	Broyles	1	2	3	4
Indian ricegrass	ORHY	5-10	35-45	15-25	5-10	10-20	15-25
Thurber needlegrass	STTH2	20-40	---	---	---	---	---
Needleandthread	STCO4	5-10	---	5-15	---	---	---
Bluegrass	POA++	2-5	---	---	---	---	---
Bottlebrush squirreltail	SIHY	---	2-5	2-5	---	5-15	5-10
Sandberg bluegrass	POSE	---	5-10	2-10	---	---	---
Basin wildrye	ELCI2	---	---	---	10-20	---	---
Thickspike wheatgrass	AGDA	---	---	---	5-10	---	---
Crag aster	ASSC3	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---
Globemallow	SPHAE	---	1-5	---	---	2-5	2-5
Wyoming big sagebrush	ARTRW	20-30	---	---	25-35	---	---
Spiny hopsage	GRSP	2-5	---	---	---	---	---
Shadscale	ATCO	---	20-30	---	---	40-50	---
Winterfat	EULA5	---	5-10	---	---	---	40-50
Black sagebrush	ARARN	---	---	25-35	---	---	---
Downy rabbitbrush	CHVIP4	---	---	2-5	---	---	---
Bud sagebrush	ARSP5	---	---	---	---	10-15	2-8

Range site number:	028BY086NV	028BY075NV	028BY011NV	028BY045NV	028BY017NV	028BY013NV
Potential production (lb/acre):						
Favorable years	800	700	600	1,000	700	700
Normal years	600	500	400	800	400	500
Unfavorable years	350	300	250	600	250	350

578-Yody gravelly sandy loam, 2 to 4 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Yody	1	2	3	4
Indian ricegrass	ORHY	5-10	20-30	15-25	20-30	20-30
Thurber needlegrass	STTH2	20-40	---	---	---	---
Needleandthread	STCO4	5-10	10-20	5-15	10-20	10-20
Bluegrass	POA++	2-5	---	---	---	---
Sandberg bluegrass	POSE	---	2-5	2-10	2-5	2-5
Bottlebrush squirreltail	SIHY	---	5-10	2-5	5-10	5-10
Crag aster	ASSC3	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	20-30	25-35	---	25-35	25-35
Spiny hopsage	GRSP	2-5	---	---	---	---
Rabbitbrush	CHRSY9	---	2-5	---	2-5	2-5
Black sagebrush	ARARN	---	---	25-35	---	---
Downy rabbitbrush	CHVIP4	---	---	2-5	---	---

Range site number: 028BY086NV 028BY010NV 028BY011NV 028BY010NV 028BY010NV

Potential production (lb/acre):

Favorable years	800	800	600	800	800
Normal years	600	600	400	600	600
Unfavorable years	350	400	250	400	400

580-Uwell-Kelk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Uwell	Kelk	1	2	3
Basin wildrye	ELCI2	10-20	10-20	---	---	10-20
Indian ricegrass	ORHY	5-10	5-10	20-30	20-30	5-10
Thickspike wheatgrass	AGDA	5-10	5-10	---	---	5-10
Needleandthread	STCO4	---	---	10-20	10-20	---
Sandberg bluegrass	POSE	---	---	2-5	2-5	---
Bottlebrush squirreltail	SIHY	---	---	2-5	5-10	---
Wyoming big sagebrush	ARTRW	25-35	25-35	25-35	25-35	25-35
Rabbitbrush	CHRSY9	---	---	---	2-5	---

Range site number:	028BY045NV	028BY045NV	028BY080NV	028BY010NV	028BY045NV
Potential production (lb/acre):					
Favorable years	1,000	1,000	600	800	1,000
Normal years	800	800	400	600	800
Unfavorable years	600	600	200	400	600

590-Raph-Katelana-Zimwala association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Raph	Katelana	Zimwala	1	2
Indian ricegrass	ORHY	10-20	1-5	2-8	30-50	2-5
Bottlebrush squirreltail	SIHY	5-15	5-10	2-5	2-5	2-5
Western wheatgrass	AGSM	---	---	5-15	---	---
Globemallow	SPHAE	2-5	---	---	---	---
Shadscale	ATCO	40-50	70-90	---	---	20-50
Bud sagebrush	ARSP5	10-15	---	---	2-8	2-10
Sickle saltbush	ATFA	---	---	55-65	---	---
Winterfat	EULA5	---	---	5-15	20-30	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---
Black greasewood	SAVE4	---	---	---	---	20-30

Range site number:	028BY017NV	028BY073NV	028BY047NV	028BY084NV	028BY074NV
Potential production (lb/acre):					
Favorable years	700	500	500	900	600
Normal years	400	400	350	700	400
Unfavorable years	250	300	200	400	200

602-Blimo-Nyak-Raph association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Blimo	Nyak	Raph	1	2	3	4
Wheatgrass	AGROP2	5-10	---	---	5-10	---	---	---
Indian ricegrass	ORHY	15-25	20-30	10-20	15-25	30-50	20-30	2-8
Bottlebrush squirreltail	SIHY	2-8	5-10	5-15	2-5	2-5	5-10	2-5
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	2-5	---
Needleandthread	STCO4	---	10-20	---	---	---	10-20	---
Bluegrass	POA++	---	---	---	2-5	---	---	---
Western wheatgrass	AGSM	---	---	---	---	---	---	5-15
Globemallow	SPHAE	---	---	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	2-5	---	---	2-5	2-5	---	---
Winterfat	EULA5	5-15	---	---	15-30	20-30	---	5-15
Wyoming big sagebrush	ARTRW	30-40	25-35	---	30-35	---	25-35	---
Rabbitbrush	CHRSY9	---	2-5	---	---	---	2-5	---
Shadscale	ATCO	---	---	40-50	---	---	---	---
Bud sagebrush	ARSP5	---	---	10-15	---	2-8	---	---
Sickle saltbush	ATFA	---	---	---	---	---	---	55-65

Range site number: 028BY014NV 028BY010NV 028BY017NV 028BY054NV 028BY084NV 028BY010NV 028BY047NV

Potential production (lb/acre):

Favorable years	600	800	700	600	900	800	500
Normal years	450	600	400	450	700	600	350
Unfavorable years	200	400	250	200	400	400	200

603-Blimo-Uwell association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Blimo	Uwell	1	2	3	4
Wheatgrass	AGROP2	5-10	5-10	---	---	---	---
Indian ricegrass	ORHY	15-25	15-25	5-10	30-50	2-8	20-30
Bottlebrush squirreltail	SIHY	2-8	2-5	---	2-5	2-5	5-10
Sandberg bluegrass	POSE	2-5	---	---	---	---	2-5
Bluegrass	POA++	---	2-5	---	---	---	---
Basin wildrye	ELCI2	---	---	10-20	---	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	---
Western wheatgrass	AGSM	---	---	---	---	5-15	---
Needleandthread	STCO4	---	---	---	---	---	10-20
Douglas rabbitbrush	CHVI8	2-5	2-5	---	2-5	---	---
Winterfat	EULA5	5-15	15-30	---	20-30	5-15	---
Wyoming big sagebrush	ARTRW	30-40	30-35	25-35	---	---	25-35
Bud sagebrush	ARSP5	---	---	---	2-8	---	---
Sickle saltbush	ATFA	---	---	---	---	55-65	---
Rabbitbrush	CHRSY9	---	---	---	---	---	2-5

Range site number:	028BY014NV	028BY054NV	028BY045NV	028BY084NV	028BY047NV	028BY010NV
Potential production (lb/acre):						
Favorable years	600	600	1,000	900	500	800
Normal years	450	450	800	700	350	600
Unfavorable years	200	200	600	400	200	400

605-Blimo-Heist-Tosser association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Blimo	Heist	Tosser	1	2	3
Wheatgrass	AGROP2	5-10	---	---	---	---	---
Indian ricegrass	ORHY	15-25	30-50	10-20	15-25	---	20-30
Bottlebrush squirreltail	SIHY	2-8	2-5	2-5	5-10	5-15	2-5
Sandberg bluegrass	POSE	2-5	---	2-5	---	---	2-5
Needleandthread	STCO4	---	---	10-20	---	---	10-20
Bluegrass	POA++	---	---	---	---	5-10	---
Globemallow	SPHAE	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	2-5	2-5	---	---	---	---
Winterfat	EULA5	5-15	20-30	---	40-50	---	---
Wyoming big sagebrush	ARTRW	30-40	---	---	---	60-70	25-35
Bud sagebrush	ARSP5	---	2-8	---	2-8	---	---
Black sagebrush	ARARN	---	---	30-40	---	---	---
Shadscale	ATCO	---	---	2-5	---	---	---

Range site number:	028BY014NV	028BY084NV	028BY016NV	028BY013NV	028BY056NV	028BY080NV
Potential production (lb/acre):						
Favorable years	600	900	400	700	450	600
Normal years	450	700	250	500	325	400
Unfavorable years	200	400	100	350	150	200

610-Broyles-Heist-Unsel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Broyles	Heist	Unsel	1	2	3	4
Indian ricegrass	ORHY	35-45	30-50	15-25	35-45	1-5	15-25	10-20
Bottlebrush squirreltail	SIHY	2-5	2-5	2-8	2-5	5-10	2-8	5-15
Sandberg bluegrass	POSE	5-10	---	---	5-10	---	2-5	---
Galleta	HIJA	---	---	5-10	---	---	---	---
Wheatgrass	AGROP2	---	---	---	---	---	5-10	---
Globemallow	SPHAE	1-5	---	---	1-5	---	---	2-5
Shadscale	ATCO	20-30	---	40-50	20-30	70-90	---	40-50
Winterfat	EULA5	5-10	20-30	5-10	5-10	---	5-15	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	2-5	---
Bud sagebrush	ARSP5	---	2-8	5-15	---	---	---	10-15
Bailey greasewood	SAVEB	---	---	0-10	---	---	---	---
Nevada ephedra	EPNE	---	---	1-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	30-40	---

Range site number: 028BY075NV 028BY084NV 029XY017NV 028BY075NV 028BY073NV 028BY014NV 028BY017NV

Potential production (lb/acre):

Favorable years	700	900	500	700	500	600	700
Normal years	500	700	350	500	400	450	400
Unfavorable years	300	400	200	300	300	200	250

620-Unsel-Broyles association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Unsel	Broyles	1	2	3	4
Bottlebrush squirreltail	SIHY	2-8	5-15	---	---	---	2-5
Galleta	HIJA	5-10	---	2-5	2-5	---	---
Indian ricegrass	ORHY	15-25	10-20	20-40	50-70	15-25	15-25
Needleandthread	STCO4	---	---	2-5	2-5	5-10	5-10
Dropseed	SPORO	---	---	2-5	---	---	---
Sand dropseed	SPCR	---	---	---	5-15	---	---
Bluegrass	POA++	---	---	---	---	2-5	---
Globemallow	SPHAE	---	2-5	2-5	---	2-5	---
Scarlet globemallow	SPCO	---	---	---	---	---	2-5
Bailey greasewood	SAVEB	0-10	---	---	---	---	---
Shadscale	ATCO	40-50	40-50	15-30	---	---	---
Winterfat	EULA5	5-10	---	5-10	2-5	---	---
Bud sagebrush	ARSP5	5-15	10-15	2-5	---	---	---
Nevada ephedra	EPNE	1-5	---	---	---	---	---
Fourwing saltbush	ATCA2	---	---	---	10-20	---	---
Black sagebrush	ARARN	---	---	---	---	15-25	---
Spiny hopsage	GRSP	---	---	---	---	20-30	15-25
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35

Range site number:	029XY017NV	028BY017NV	029XY090NV	029XY012NV	028BY053NV	028BY052NV
Potential production (lb/acre):						
Favorable years	500	700	700	700	600	700
Normal years	350	400	500	500	400	500
Unfavorable years	200	250	300	300	200	400

621-Nyala-Breko-Unsel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name			Inclusion number--
		Nyala	Breko	Unsel	1
Needleandthread	STCO4	2-5	10-20	---	10-20
Dropseed	SPORO	2-5	---	---	---
Indian ricegrass	ORHY	20-40	15-25	15-25	20-30
Galleta	HIJA	2-5	2-5	5-10	---
Desert needlegrass	STSP3	---	2-8	---	---
Bottlebrush squirreltail	SIHY	---	2-8	2-8	5-10
Sandberg bluegrass	POSE	---	---	---	2-5
Globemallow	SPHAE	2-5	---	---	---
Shadscale	ATCO	15-30	---	40-50	---
Winterfat	EULAS	5-10	---	5-10	---
Bud sagebrush	ARSP5	2-5	---	5-15	---
Wyoming big sagebrush	ARTRW	---	25-35	---	25-35
Fourwing saltbush	ATCA2	---	2-5	---	---
Nevada ephedra	EPNE	---	2-5	1-5	---
Bailey greasewood	SAVEB	---	---	0-10	---
Rabbitbrush	CHRSY9	---	---	---	2-5

Range site number:	029XY090NV	029XY006NV	029XY017NV	028BY010NV
Potential production (lb/acre):				
Favorable years	700	800	500	800
Normal years	500	600	350	600
Unfavorable years	300	300	200	400

630-Molion-Haarvar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Molion	Haarvar, less sloping	Haarvar, moderately steep	1	2
Galleta	HIJA	2-8	2-8	2-5	---	---
Needleandthread	STCO4	5-15	5-15	15-30	5-10	---
Desert needlegrass	STSP3	2-5	2-5	---	---	---
Indian ricegrass	ORHY	15-25	15-25	5-10	15-25	1-5
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	---
Bottlebrush squirreltail	SIHY	1-5	1-5	---	---	1-5
Bluegrass	POA++	---	---	---	2-5	1-5
Bluebunch wheatgrass	AGSP	---	---	---	---	1-5
Thurber needlegrass	STTH2	---	---	---	---	1-5
Globemallow	SPHAE	---	---	---	2-5	---
Black sagebrush	ARARN	25-35	25-35	35-45	15-25	1-5
Nevada ephedra	EPNE	2-5	2-5	5-10	---	---
Winterfat	EULA5	2-5	2-5	1-5	---	---
Spiny hopsage	GRSP	---	---	---	20-30	---
Utah juniper	JUOS	---	---	---	---	1-5
Singleleaf pinyon	PIMO	---	---	---	---	1-5

Range site number:	029XY008NV	029XY008NV	029XY014NV	028BY053NV	028BY060NV
Potential production (lb/acre):					
Favorable years	700	700	400	600	500
Normal years	500	500	275	400	375
Unfavorable years	250	250	100	200	250

631-Roden-Haarvar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Roden	Haarvar	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---
Bottlebrush squirreltail	SIHY	2-5	---	1-5	2-8	---	1-5
Indian ricegrass	ORHY	10-20	5-10	1-5	15-25	---	1-5
Needleandthread	STCO4	10-20	15-30	---	10-20	---	1-5
Galleta	HIJA	---	2-5	---	2-5	---	---
Bluegrass	POA++	---	---	1-5	---	---	1-5
Bluebunch wheatgrass	AGSP	---	---	1-5	---	---	---
Thurber needlegrass	STTH2	---	---	1-5	---	---	---
Desert needlegrass	STSP3	---	---	---	2-8	---	---
Basin wildrye	ELCI2	---	---	---	---	---	1-5
Thickstem cabbage	CACR11	---	---	---	---	---	1-5
Black sagebrush	ARARN	30-40	35-45	1-5	---	---	1-5
Shadscale	ATCO	2-5	---	---	---	---	---
Nevada ephedra	EPNE	---	5-10	---	2-5	---	---
Winterfat	EULA5	---	1-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Fourwing saltbush	ATCA2	---	---	---	2-5	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	---	1-5
Utah juniper	JUOS	---	---	1-5	---	---	1-5
Singleleaf pinyon	PIMO	---	---	1-5	---	---	---

Range site number:	028BY016NV	029XY014NV	028BY060NV	029XY006NV	None	028BY083NV
Potential production (lb/acre):						
Favorable years	400	400	500	800	---	175
Normal years	250	275	375	600	---	125
Unfavorable years	100	100	250	300	---	75

632-Roden-Haarvar association, steep

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Roden	Haarvar	1	2
Sandberg bluegrass	POSE	2-5	2-5	2-5	---
Bottlebrush squirreltail	SIHY	2-5	---	1-5	---
Indian ricegrass	ORHY	10-20	5-10	15-25	---
Needleandthread	STCO4	10-20	15-30	5-15	---
Galleta	HIJA	---	2-5	2-8	---
Desert needlegrass	STSP3	---	---	2-5	---
Black sagebrush	ARARN	30-40	35-45	25-35	---
Shadscale	ATCO	2-5	---	---	---
Nevada ephedra	EPNE	---	5-10	2-5	---
Winterfat	EULA5	---	1-5	2-5	---

Range site number: 028BY016NV 029XY014NV 029XY008NV None

Potential production (lb/acre):

Favorable years	400	400	700	---
Normal years	250	275	500	---
Unfavorable years	100	100	250	---

633-Roden-Izar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Roden	Izar	Roden, eroded	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-5	---	2-10
Bottlebrush squirreltail	SIHY	2-5	2-5	1-5	---	5-10	5-10	2-5
Indian ricegrass	ORHY	10-20	10-20	1-5	5-10	20-30	15-25	15-25
Needleandthread	STCO4	10-20	10-20	---	---	10-20	---	5-15
Bluegrass	POA++	---	---	1-5	---	---	---	---
Bluebunch wheatgrass	AGSP	---	---	1-5	---	---	---	---
Thurber needlegrass	STTH2	---	---	1-5	---	---	---	---
Basin wildrye	ELCI2	---	---	---	10-20	---	---	---
Thickspike wheatgrass	AGDA	---	---	---	5-10	---	---	---
Globeamallow	SPHAE	---	---	---	---	---	2-5	---
Black sagebrush	ARARN	30-40	30-40	1-5	---	---	---	25-35
Shadscale	ATCO	2-5	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	25-35	---	---
Rabbitbrush	CHRSY9	---	---	---	---	2-5	---	---
Winterfat	EULA5	---	---	---	---	---	40-50	---
Bud sagebrush	ARSP5	---	---	---	---	---	2-8	---
Downy rabbitbrush	CHVIP4	---	---	---	---	---	---	2-5
Utah juniper	JUOS	---	---	1-5	---	---	---	---
Singleleaf pinyon	PIMO	---	---	1-5	---	---	---	---

Range site number: 028BY016NV 028BY016NV 028BY060NV 028BY045NV 028BY010NV 028BY013NV 028BY011NV

Potential production (lb/acre):

Favorable years	400	400	500	1,000	800	700	600
Normal years	250	250	375	800	600	500	400
Unfavorable years	100	100	250	600	400	350	250

640-Uwell-Katelana association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Uwell	Katelana	1	2
Indian ricegrass	ORHY	15-25	1-5	15-25	5-10
Bluegrass	POA++	2-5	---	---	2-5
Bottlebrush squirreltail	SIHY	2-5	5-10	5-10	---
Wheatgrass	AGROP2	5-10	---	---	---
Thurber needlegrass	STTH2	---	---	---	20-40
Needleandthread	STCO4	---	---	---	5-10
Globemallow	SPHAE	---	---	2-5	---
Crag aster	ASSC3	---	---	---	2-5
Tapertip hawksbeard	CRAC2	---	---	---	2-5
Winterfat	EULA5	15-30	---	40-50	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---
Wyoming big sagebrush	ARTRW	30-35	---	---	20-30
Shadscale	ATCO	---	70-90	---	---
Bud sagebrush	ARSP5	---	---	2-8	---
Spiny hopsage	GRSP	---	---	---	2-5

Range site number:	028BY054NV	028BY073NV	028BY013NV	028BY086NV
Potential production (lb/acre):				
Favorable years	600	500	700	800
Normal years	450	400	500	600
Unfavorable years	200	300	350	350

642-Kunzler-Linoyer association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Kunzler	Linoyer	1	2	3	4
Bluegrass	POA++	5-10	---	---	---	---	---
Bottlebrush squirreltail	SIHY	5-15	5-10	2-8	2-5	2-5	5-15
Indian ricegrass	ORHY	---	15-25	15-25	10-20	30-50	10-20
Wheatgrass	AGROP2	---	---	5-10	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	2-5	---	---
Needleandthread	STCO4	---	---	---	10-20	---	---
Globemallow	SPHAE	---	2-5	---	---	---	2-5
Wyoming big sagebrush	ARTRW	60-70	---	30-40	---	---	---
Winterfat	EULA5	---	40-50	5-15	---	20-30	---
Bud sagebrush	ARSP5	---	2-8	---	---	2-8	10-15
Douglas rabbitbrush	CHVI8	---	---	2-5	---	2-5	---
Black sagebrush	ARARN	---	---	---	30-40	---	---
Shadscale	ATCO	---	---	---	2-5	---	40-50

Range site number:	028BY056NV	028BY013NV	028BY014NV	028BY016NV	028BY084NV	028BY017NV
Potential production (lb/acre):						
Favorable years	450	700	600	400	900	700
Normal years	325	500	450	250	700	400
Unfavorable years	150	350	200	100	400	250

643-Kunzler-Bylo-Zimwala association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Kunzler	Bylo	Zimwala	1	2	3
Bluegrass	POA++	5-10	---	---	---	---	---
Bottlebrush squirreltail	SIHY	5-15	5-10	2-5	2-5	2-8	2-5
Indian ricegrass	ORHY	---	15-25	2-8	10-20	15-25	30-50
Western wheatgrass	AGSM	---	---	5-15	---	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	2-5	---
Needleandthread	STCO4	---	---	---	10-20	---	---
Wheatgrass	AGROP2	---	---	---	---	5-10	---
Globemallow	SPHAE	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	60-70	---	---	---	30-40	---
Winterfat	EULA5	---	40-50	5-15	---	5-15	20-30
Bud sagebrush	ARSP5	---	2-8	---	---	---	2-8
Sickle saltbush	ATFA	---	---	55-65	---	---	---
Black sagebrush	ARARN	---	---	---	30-40	---	---
Shadscale	ATCO	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	2-5

Range site number:	028BY056NV	028BY013NV	028BY047NV	028BY016NV	028BY014NV	028BY084NV
Potential production (lb/acre):						
Favorable years	450	700	500	400	600	900
Normal years	325	500	350	250	450	700
Unfavorable years	150	350	200	100	200	400

645-Kunzler-Blimo-Uwell association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Kunzler	Blimo	Uwell	1	2
Bluegrass	POA++	5-10	---	2-5	---	---
Bottlebrush squirreltail	SIHY	5-15	2-8	2-5	5-10	2-5
Wheatgrass	AGROP2	---	5-10	5-10	---	---
Indian ricegrass	ORHY	---	15-25	15-25	15-25	10-20
Sandberg bluegrass	POSE	---	2-5	---	---	---
Western wheatgrass	AGSM	---	---	---	---	5-15
Globemallow	SPHAE	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	60-70	30-40	30-35	---	---
Douglas rabbitbrush	CHVI8	---	2-5	2-5	---	---
Winterfat	EULA5	---	5-15	15-30	40-50	2-5
Bud sagebrush	ARSP5	---	---	---	2-8	---
Sickle saltbush	ATFA	---	---	---	---	45-55

Range site number:	028BY056NV	028BY014NV	028BY054NV	028BY013NV	028BY065NV
Potential production (lb/acre):					
Favorable years	450	600	600	700	700
Normal years	325	450	450	500	500
Unfavorable years	150	200	200	350	350

650-Eaglepass-Kyler-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Eaglepass	Kyler	Rock outcrop	1	2	3
Indian ricegrass	ORHY	2-5	5-10	---	15-25	15-25	15-25
Needleandthread	STCO4	5-15	15-30	---	5-15	---	5-15
Needlegrass	STIPA	2-5	---	---	---	---	---
Sandberg bluegrass	POSE	---	2-5	---	2-10	2-5	2-5
Galleta	HIJA	---	2-5	---	---	---	2-8
Bottlebrush squirreltail	SIHY	---	---	---	2-5	2-5	1-5
Pine needlegrass	STPI2	---	---	---	---	2-5	---
Bluebunch wheatgrass	AGSP	---	---	---	---	2-5	---
Desert needlegrass	STSP3	---	---	---	---	---	2-5
Nevada greasebush	FONE2	1-3	---	---	---	---	---
Littleleaf mountainmahogany	CEIN7	40-60	---	---	---	---	---
Black sagebrush	ARARN	10-20	35-45	---	25-35	40-50	25-35
Ephedra	EPHED	2-8	---	---	---	---	---
Nevada ephedra	EPNE	---	5-10	---	---	---	2-5
Winterfat	EULA5	---	1-5	---	---	---	2-5
Downy rabbitbrush	CHVIP4	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---
Utah juniper	JUOS	---	---	---	---	1-3	---

Range site number:	029XY040NV	029XY014NV	None	028BY011NV	028BY059NV	029XY008NV
Potential production (lb/acre):						
Favorable years	600	400	---	600	400	700
Normal years	450	275	---	400	350	500
Unfavorable years	300	100	---	250	125	250

660-Stewval-Rock outcrop complex

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Stewval	Rock outcrop	1	2	3	4
Needleandthread	STCO4	15-30	---	10-20	---	---	2-8
Sandberg bluegrass	POSE	2-5	---	2-5	---	---	---
Galleta	HIJA	2-5	---	---	10-20	1-3	---
Indian ricegrass	ORHY	5-10	---	20-30	5-15	2-8	20-30
Bottlebrush squirreltail	SIHY	---	---	5-10	2-5	---	---
Desert needlegrass	STSP3	---	---	---	2-8	---	---
Basin wildrye	ELCI2	---	---	---	---	2-8	---
Thurber needlegrass	STTH2	---	---	---	---	---	15-25
Black sagebrush	ARARN	35-45	---	---	---	---	20-35
Nevada ephedra	EPNE	5-10	---	---	---	---	---
Winterfat	EULA5	1-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---	---
Rabbitbrush	CHRSY9	---	---	2-5	---	---	---
Bud sagebrush	ARSP5	---	---	---	5-10	---	---
Shadscale	ATCO	---	---	---	20-30	---	---

Range site number:	029XY014NV	None	028BY010NV	029XY022NV	029XY009NV	028BY089NV
Potential production (lb/acre):						
Favorable years	400	---	800	400	700	450
Normal years	275	---	600	250	500	300
Unfavorable years	100	---	400	100	200	150

670-Cavehill-Grink-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Cavehill	Grink	Rock outcrop	1	2	3	4
Canby bluegrass	FOCA	1-5	---	---	1-5	---	5-15	---
Bluebunch wheatgrass	AGSP	1-5	20-30	---	1-5	15-30	60-80	40-60
Indian ricegrass	ORHY	1-5	---	---	---	---	---	---
Thurber needlegrass	STTH2	1-5	---	---	---	---	---	---
Basin wildrye	ELCI2	1-5	---	---	1-5	---	---	---
Muttongrass	POFE	---	---	---	1-5	---	---	5-10
Slender wheatgrass	AGTR	---	---	---	---	5-10	---	---
Needlegrass	STIPA	---	---	---	---	15-30	---	---
Spike-fescue	LEKI2	---	---	---	---	5-10	1-10	---
Mountain brome	BRCA5	---	---	---	---	5-10	---	---
Pine needlegrass	STPI2	---	---	---	---	---	---	2-8
Goldenweed	HAPLO2	---	---	---	---	---	---	2-8
Mountain big sagebrush	ARVA2	1-5	15-25	---	1-5	15-25	10-20	---
Snowberry	SYMPH	---	2-8	---	1-5	2-8	2-8	---
Serviceberry	AMELA	---	---	---	1-5	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	1-5	---	---	---
Utah serviceberry	AMUT	---	---	---	---	1-5	---	---
Black sagebrush	ARARN	---	---	---	---	---	---	30-40
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	2-5
Singleleaf pinyon	PIMO	1-5	---	---	1-5	---	---	---
Utah juniper	JUOS	1-5	---	---	---	---	---	---
Curlleaf mountainmahogany	CELE3	---	15-25	---	1-5	---	---	---

Range site number:	028BY062NV	028BY043NV	None	028BY058NV	028BY085NV	028BY070NV	028BY048NV
Potential production (lb/acre):							
Favorable years	700	1,700	---	500	1,500	1,100	450
Normal years	500	1,300	---	375	1,100	900	300
Unfavorable years	300	900	---	250	700	600	150

680-Genaw-Puett-Abgese association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name			Inclusion number--
		Genaw	Puett	Abgese	1
Sandberg bluegrass	POSE	2-5	1-5	2-5	2-10
Needleandthread	STCO4	10-20	---	10-20	5-15
Indian ricegrass	ORHY	20-30	1-5	20-30	15-25
Bottlebrush squirreltail	SIHY	5-10	1-5	5-10	2-5
Thurber needlegrass	STTH2	---	1-5	---	---
Bluebunch wheatgrass	AGSP	---	1-5	---	---
Bluegrass	POA++	---	1-5	---	---
Tapertip hawksbeard	CRAC2	---	1-5	---	---
Phlox	PHLOX	---	1-5	---	---
Eriogonum	ERIOG	---	1-5	---	---
Milkvetch	ASTRA	---	1-5	---	---
Wyoming big sagebrush	ARTRW	25-35	1-5	25-35	---
Rabbitbrush	CHRSY9	2-5	---	2-5	---
Antelope bitterbrush	PUTR2	---	1-5	---	---
Rabbitbrush	CHRSY9	---	1-5	---	---
Black sagebrush	ARARN	---	---	---	25-35
Downy rabbitbrush	CHVIP4	---	---	---	2-5
Utah juniper	JUOS	---	1-5	---	---

Range site number:	028BY010NV	025XY059NV	028BY010NV	028BY011NV
Potential production (lb/acre):				
Favorable years	800	500	800	600
Normal years	600	350	600	400
Unfavorable years	400	200	400	250

690-Devilsgait-Cassiro association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Devilsgait	Cassiro	1	2	3
Basin wildrye	ELCI2	60-70	2-10	---	---	2-8
Nevada bluegrass	PONE3	5-10	---	---	50-60	---
Wheatgrass	AGROP2	5-10	---	---	---	---
Bluebunch wheatgrass	AGSP	---	30-40	---	---	30-40
Thurber needlegrass	STTH2	---	10-20	---	---	---
Bluegrass	POA++	---	2-8	---	---	5-10
Sedge	CAREX	---	---	20-30	5-15	---
Alpine timothy	PHAL2	---	---	2-5	20-30	---
Rush	JUNCU	---	---	2-8	---	---
Tufted hairgrass	DECE	---	---	30-40	---	---
Meadow barley	HOBR2	---	---	2-5	5-10	---
Mat muhly	MURI	---	---	---	5-10	---
Kentucky bluegrass	POPR	---	---	---	2-5	---
Indian ricegrass	ORHY	---	---	---	---	2-5
Mountain big sagebrush	ARVA2	5-15	20-25	---	---	15-25
Willow	SALIX	2-5	---	---	---	---
Antelope bitterbrush	PUTR2	---	2-10	---	---	2-10
Silver sagebrush	ARCA13	---	---	2-8	---	---
Snowberry	SYMPH	---	---	---	---	2-5
Utah serviceberry	AMUT	---	---	---	---	1-5

Range site number: 028BY024NV 028BY030NV 028BY022NV 028BY095NV 028BY088NV

Potential production (lb/acre):

Favorable years	5,000	1,500	3,200	1,600	1,100
Normal years	2,500	1,200	2,000	1,300	900
Unfavorable years	1,500	900	1,400	800	700

710-Raph loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name	Inclusion number--	
		Raph	1	2
Indian ricegrass	ORHY	10-20	15-25	20-30
Bottlebrush squirreltail	SIHY	5-15	5-10	5-10
Sandberg bluegrass	POSE	---	---	2-5
Needleandthread	STCO4	---	---	10-20
Globemallow	SPHAE	2-5	2-5	---
Shadscale	ATCO	40-50	---	---
Bud sagebrush	ARSP5	10-15	2-8	---
Winterfat	EULA5	---	40-50	---
Wyoming big sagebrush	ARTRW	---	---	25-35
Rabbitbrush	CHRSY9	---	---	2-5

Range site number: 028BY017NV 028BY013NV 028BY010NV

Potential production (lb/acre):

Favorable years	700	700	800
Normal years	400	500	600
Unfavorable years	250	350	400

730-Zimwala-Uwell-Zimwala, moist association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Zimwala	Uwell	Zimwala, moist	1	2	3	4
Indian ricegrass	ORHY	2-8	15-25	15-25	20-30	5-15	2-10	2-5
Bottlebrush squirreltail	SIHY	2-5	2-5	5-10	5-10	2-5	---	2-5
Western wheatgrass	AGSM	5-15	---	---	---	---	---	---
Bluegrass	POA++	---	2-5	---	---	---	---	---
Wheatgrass	AGROP2	---	5-10	---	---	20-30	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	---	---	---
Needleandthread	STCO4	---	---	---	10-20	---	---	---
Basin wildrye	ELCI2	---	---	---	---	---	10-20	---
Globemallow	SPHAE	---	---	2-5	---	---	---	---
Sickle saltbush	ATFA	55-65	---	---	---	---	---	---
Winterfat	EULA5	5-15	15-30	40-50	---	40-50	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	30-35	---	25-35	---	---	---
Bud sagebrush	ARSP5	---	---	2-8	---	---	---	2-10
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---	---
Big sagebrush	ARTR2	---	---	---	---	---	20-30	---
Rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5	---
Black greasewood	SAVE4	---	---	---	---	---	30-40	20-30
Shadscale	ATCO	---	---	---	---	---	---	20-50

Range site number: 028BY047NV 028BY054NV 028BY013NV 028BY010NV 028BY071NV 028BY028NV 028BY074NV

Potential production (lb/acre):

Favorable years	500	600	700	800	600	800	600
Normal years	350	450	500	600	400	600	400
Unfavorable years	200	200	350	400	200	400	200

731-Zimwala-Uwell association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Zimwala	Uwell	1	2	3
Bottlebrush squirreltail	SIHY	5-10	2-5	5-10	5-10	---
Indian ricegrass	ORHY	15-25	15-25	20-30	20-30	2-10
Bluegrass	POA++	---	2-5	---	---	---
Wheatgrass	AGROP2	---	5-10	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	2-5	---
Needleandthread	STCO4	---	---	10-20	10-20	---
Basin wildrye	ELCI2	---	---	---	---	10-20
Globemallow	SPHAE	2-5	---	---	---	---
Winterfat	EULA5	40-50	15-30	---	---	---
Bud sagebrush	ARSP5	2-8	---	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	30-35	25-35	25-35	---
Rabbitbrush	CHRSY9	---	---	2-5	2-5	---
Big sagebrush	ARTR2	---	---	---	---	20-30
Rubber rabbitbrush	CHNA2	---	---	---	---	2-5
Black greasewood	SAVE4	---	---	---	---	30-40

Range site number: 028BY013NV 028BY054NV 028BY010NV 028BY010NV 028BY028NV

Potential production (lb/acre):

Favorable years	700	600	800	800	800
Normal years	500	450	600	600	600
Unfavorable years	350	200	400	400	400

740-Orupa-Uwell association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Orupa	Uwell	1	2	3
Bottlebrush squirreltail	SIHY	2-5	2-5	---	---	5-10
Indian ricegrass	ORHY	5-15	15-25	2-10	---	15-25
Wheatgrass	AGROP2	20-30	5-10	---	---	---
Bluegrass	POA++	---	2-5	---	---	---
Basin wildrye	ELCI2	---	---	10-20	30-60	---
Alkali sacaton	SPAI	---	---	---	30-40	---
Inland saltgrass	DISPS2	---	---	---	2-5	---
Western wheatgrass	AGSM	---	---	---	2-5	---
Globemallow	SPHAE	---	---	---	---	2-5
Winterfat	EULA5	40-50	15-30	---	---	40-50
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	30-35	---	---	---
Big sagebrush	ARTR2	---	---	20-30	---	---
Rubber rabbitbrush	CHNA2	---	---	2-5	2-5	---
Black greasewood	SAVE4	---	---	30-40	5-15	---
Bud sagebrush	ARSP5	---	---	---	---	2-8

Range site number:	028BY071NV	028BY054NV	028BY028NV	028BY004NV	028BY013NV
Potential production (lb/acre):					
Favorable years	600	600	800	2,200	700
Normal years	400	450	600	1,500	500
Unfavorable years	200	200	400	800	350

741-Orupa association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Orupa, nearly level	Orupa, gently sloping	1	2	3
Indian ricegrass	ORHY	15-25	15-25	5-15	---	2-5
Bluegrass	POA++	2-5	---	---	---	---
Bottlebrush squirreltail	SIHY	2-5	---	2-5	---	2-5
Wheatgrass	AGROP2	5-10	---	20-30	---	---
Needleandthread	STCO4	---	15-25	---	---	---
Thickspike wheatgrass	AGDA	---	5-15	---	---	---
Letterman needlegrass	STLE4	---	---	---	1-5	---
Bluebunch wheatgrass	AGSP	---	---	---	1-5	---
Slender wheatgrass	AGTR	---	---	---	1-5	---
Nevada bluegrass	PONE3	---	---	---	1-5	---
Spike-fescue	LEKI2	---	---	---	1-5	---
Sedge	CAREX	---	---	---	1-5	---
Mountain brome	BRCA5	---	---	---	1-5	---
Creeping barberry	BERE	---	---	---	1-5	---
Winterfat	EULA5	15-30	2-5	40-50	---	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	30-35	---	---	---	---
Big sagebrush	ARTR2	---	15-25	---	---	---
Fourwing saltbush	ATCA2	---	2-8	---	---	---
Rabbitbrush	CHRY9	---	2-5	---	---	---
Common juniper	JUCO6	---	---	---	1-5	---
Snowberry	SYMPH	---	---	---	1-5	---
Serviceberry	AMELA	---	---	---	1-5	---
Shadscale	ATCO	---	---	---	---	20-50
Bud sagebrush	ARSP5	---	---	---	---	2-10
Black greasewood	SAVE4	---	---	---	---	20-30
Quaking aspen	POTRT	---	---	---	1-5	---
White fir	ABCO	---	---	---	1-5	---

Range site number: 028BY054NV 028BY005NV 028BY071NV 028BY055NV 028BY074NV

Potential production (lb/acre):

Favorable years	600	800	600	600	600
Normal years	450	600	400	425	400
Unfavorable years	200	400	200	250	200

750-Upatad-Atlow association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Upatad	Upatad, eroded	Atlow	1	2	3
Bluegrass	POA++	2-8	1-5	---	---	---	---
Bluebunch wheatgrass	AGSP	20-30	1-5	---	---	---	---
Thurber needlegrass	STTH2	10-20	1-5	15-25	---	---	---
Indian ricegrass	ORHY	2-5	1-5	20-30	20-30	---	20-30
Bottlebrush squirreltail	SIHY	---	1-5	---	5-10	---	5-10
Needleandthread	STCO4	---	---	2-8	10-20	---	10-20
Sandberg bluegrass	POSE	---	---	---	2-5	---	2-5
Black sagebrush	ARARN	25-35	1-5	20-35	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	25-35
Rabbitbrush	CHRSY9	---	---	---	2-5	---	2-5
Utah juniper	JUOS	---	1-5	---	---	---	---
Singleleaf pinyon	PIMO	---	1-5	---	---	---	---
Range site number:		028BY093NV	028BY060NV	028BY089NV	028BY010NV	None	028BY010NV
Potential production (lb/acre):							
Favorable years		800	500	450	800	---	800
Normal years		600	375	300	600	---	600
Unfavorable years		400	250	150	400	---	400

751-Upatad-Pookaloo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Upatad	Pookaloo	1	2	3	4
Bluegrass	POA++	2-8	1-5	5-10	1-5	---	---
Bluebunch wheatgrass	AGSP	20-30	1-5	30-40	---	---	---
Thurber needlegrass	STTH2	10-20	1-5	---	---	---	15-25
Indian ricegrass	ORHY	2-5	1-5	10-20	1-5	5-10	20-30
Bottlebrush squirreltail	SIHY	---	1-5	---	1-5	---	---
Needleandthread	STCO4	---	---	---	1-5	---	2-8
Basin wildrye	ELCI2	---	---	---	1-5	10-20	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
Thickstem cabbage	CACR11	---	---	---	1-5	---	---
Black sagebrush	ARARN	25-35	1-5	---	1-5	---	20-35
Antelope bitterbrush	PUTR2	---	---	5-10	1-5	---	---
Mountain big sagebrush	ARVA2	---	---	15-25	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
Utah juniper	JUOS	---	1-5	---	1-5	---	---
Singleleaf pinyon	PIMO	---	1-5	---	---	---	---

Range site number:	028BY093NV	028BY060NV	028BY079NV	028BY083NV	028BY045NV	028BY089NV
Potential production (lb/acre):						
Favorable years	800	500	700	175	1,000	450
Normal years	600	375	500	125	800	300
Unfavorable years	400	250	300	75	600	150

752-Upatad-Atlow-Pioche association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Upatad	Atlow	Pioche	1	2	3
Bluegrass	POA++	2-8	---	---	2-8	2-10	---
Bluebunch wheatgrass	AGSP	20-30	---	1-5	5-10	10-25	---
Thurber needlegrass	STTH2	10-20	15-25	1-5	30-40	5-15	---
Indian ricegrass	ORHY	2-5	20-30	1-5	2-5	---	---
Needleandthread	STCO4	---	2-8	---	2-8	---	---
Canby bluegrass	POCA	---	---	1-5	---	---	---
Basin wildrye	ELCI2	---	---	1-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---
Arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---
Black sagebrush	ARARN	25-35	20-35	---	---	---	---
Mountain big sagebrush	ARVA2	---	---	1-5	---	---	---
Big sagebrush	ARTR2	---	---	---	15-25	---	---
Antelope bitterbrush	PUTR2	---	---	---	2-10	1-10	---
Low sagebrush	ARAR8	---	---	---	---	25-35	---
Singleleaf pinyon	PIMO	---	---	1-5	---	---	---
Utah juniper	JUOS	---	---	1-5	---	---	---

Range site number:	028BY093NV	028BY089NV	028BY062NV	028BY007NV	028BY039NV	None
Potential production (lb/acre):						
Favorable years	800	450	700	1,000	500	---
Normal years	600	300	500	800	350	---
Unfavorable years	400	150	300	600	200	---

753-Upatad-Cropper-Atlow association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Upatad	Cropper	Atlow	1	2	3	4
Bluegrass	POA++	2-8	---	---	---	2-5	---	---
Bluebunch wheatgrass	AGSP	20-30	1-5	---	---	20-40	---	---
Thurber needlegrass	STTH2	10-20	---	15-25	---	15-30	15-25	---
Indian ricegrass	ORHY	2-5	---	20-30	---	---	20-30	5-10
Basin wildrye	ELCI2	---	1-5	---	---	2-8	---	10-20
Muttongrass	POFE	---	1-5	---	---	---	---	---
Canby bluegrass	POCA	---	1-5	---	---	---	---	---
Needleandthread	STCO4	---	---	2-8	---	---	2-8	---
Thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
Crag aster	ASSC3	---	---	---	---	2-5	---	---
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---	---
Black sagebrush	ARARN	25-35	---	20-35	---	---	20-35	---
Serviceberry	AMELA	---	1-5	---	---	---	---	---
Mountain big sagebrush	ARVA2	---	1-5	---	---	15-25	---	---
Antelope bitterbrush	PUTR2	---	1-5	---	---	5-10	---	---
Snowberry	SYMPH	---	1-5	---	---	---	---	---
Curleaf mountainmahogany	CELE3	---	1-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	25-35
Singleleaf pinyon	PIMO	---	1-5	---	---	---	---	---

Range site number:	028BY093NV	028BY058NV	028BY089NV	None	028BY087NV	028BY089NV	028BY045NV
Potential production (lb/acre):							
Favorable years	800	500	450	---	900	450	1,000
Normal years	600	375	300	---	700	300	800
Unfavorable years	400	250	150	---	450	150	600

760-Segura-Upatad-Cropper association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Segura	Upatad	Cropper	1	2	3
Thurber needlegrass	STTH2	15-30	10-20	---	20-40	---	---
Bluebunch wheatgrass	AGSP	20-40	20-30	1-5	---	---	---
Basin wildrye	ELCI2	2-8	---	1-5	---	---	---
Bluegrass	POA++	2-5	2-8	---	2-5	---	---
Indian ricegrass	ORHY	---	2-5	---	5-10	---	---
Muttongrass	POFE	---	---	1-5	---	---	---
Canby bluegrass	POCA	---	---	1-5	---	---	---
Needleandthread	STCO4	---	---	---	5-10	---	---
Crag aster	ASSC3	2-5	---	---	2-5	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	2-5	---	---
Mountain big sagebrush	ARVA2	15-25	---	1-5	---	---	---
Antelope bitterbrush	PUTR2	5-10	---	1-5	---	---	---
Black sagebrush	ARARN	---	25-35	---	---	---	---
Serviceberry	AMELA	---	---	1-5	---	---	---
Snowberry	SYMPH	---	---	1-5	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	1-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---	---
Spiny hopsage	GRSP	---	---	---	2-5	---	---
Singleleaf pinyon	PIMO	---	---	1-5	---	---	---

Range site number:	028BY087NV	028BY093NV	028BY058NV	028BY086NV	None	None
Potential production (lb/acre):						
Favorable years	900	800	500	800	---	---
Normal years	700	600	375	600	---	---
Unfavorable years	450	400	250	350	---	---

762-Segura-Eoj-Cassiro association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Segura	Eoj	Cassiro	1	2
Thurber needlegrass	STTH2	15-30	---	30-40	1-5	10-20
Bluebunch wheatgrass	AGSP	20-40	20-30	5-10	1-5	30-40
Basin wildrye	ELCI2	2-8	---	---	1-5	2-10
Bluegrass	POA++	2-5	2-10	2-8	---	2-8
Indian ricegrass	ORHY	---	---	2-5	1-5	---
Needleandthread	STCO4	---	---	2-8	---	---
Canby bluegrass	POCA	---	---	---	1-5	---
Crag aster	ASSC3	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	2-5	---	---
Arrowleaf balsamroot	BASA3	---	---	2-5	---	---
Mountain big sagebrush	ARVA2	15-25	---	---	1-5	20-25
Antelope bitterbrush	PUTR2	5-10	2-5	2-10	---	2-10
Low sagebrush	ARAR8	---	25-35	---	---	---
Big sagebrush	ARTR2	---	---	15-25	---	---
Singleleaf pinyon	PIMO	---	---	---	1-5	---
Utah juniper	JUOS	---	---	---	1-5	---

Range site number:	028BY087NV	028BY037NV	028BY007NV	028BY062NV	028BY030NV
Potential production (lb/acre):					
Favorable years	900	800	1,000	700	1,500
Normal years	700	600	800	500	1,200
Unfavorable years	450	400	600	300	900

763-Segura-Pioche-McIvey association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Segura	Pioche	McIvey	1	2	3	4
Thurber needlegrass	STTH2	15-30	1-5	10-20	10-20	---	1-5	---
Bluebunch wheatgrass	AGSP	20-40	1-5	30-40	20-30	30-40	1-5	---
Basin wildrye	ELCI2	2-8	1-5	2-10	---	2-8	1-5	---
Bluegrass	POA++	2-5	---	2-8	2-8	2-8	---	---
Canby bluegrass	POCA	---	1-5	---	---	---	1-5	---
Indian ricegrass	ORHY	---	1-5	---	2-5	---	1-5	---
Needlegrass	STIPA	---	---	---	---	5-15	---	---
Crag aster	ASSC3	2-5	---	---	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	---	---	---	2-5	---	---
Arrowleaf balsamroot	BASA3	---	---	---	---	2-5	---	---
Mountain big sagebrush	ARVA2	15-25	1-5	20-25	---	15-20	1-5	---
Antelope bitterbrush	PUTR2	5-10	---	2-10	---	2-8	---	---
Black sagebrush	ARARN	---	---	---	25-35	---	---	---
Snowberry	SYMPH	---	---	---	---	5-10	---	---
Utah serviceberry	AMUT	---	---	---	---	5-10	---	---
Singleleaf pinyon	PIMO	---	1-5	---	---	---	1-5	---
Utah juniper	JUOS	---	1-5	---	---	---	1-5	---

Range site number: 028BY087NV 028BY062NV 028BY030NV 028BY093NV 028BY015NV 028BY062NV None

Potential production (lb/acre):

Favorable years	900	700	1,500	800	1,500	700	---
Normal years	700	500	1,200	600	1,100	500	---
Unfavorable years	450	300	900	400	700	300	---

770-Cropper-Birchcreek-Segura association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Cropper	Birchcreek	Segura	1	2	3
Basin wildrye	ELCI2	1-5	---	2-8	2-8	---	---
Bluebunch wheatgrass	AGSP	1-5	10-20	20-40	30-40	---	1-5
Muttongrass	POFE	1-5	---	---	---	---	---
Canby bluegrass	POCA	1-5	---	---	---	---	---
Indian ricegrass	ORHY	---	2-5	---	---	---	1-5
Needlegrass	STIPA	---	5-10	---	5-15	---	---
Bluegrass	POA++	---	2-8	2-5	2-8	---	1-5
Thurber needlegrass	STTH2	---	---	15-30	---	---	1-5
Bottlebrush squirreltail	SIHY	---	---	---	---	---	1-5
Crag aster	ASSC3	---	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	2-5	2-5	---	---
Arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---
Serviceberry	AMELA	1-5	---	---	---	---	---
Mountain big sagebrush	ARVA2	1-5	5-15	15-25	15-20	---	---
Antelope bitterbrush	PUTR2	1-5	30-45	5-10	2-8	---	---
Snowberry	SYMPH	1-5	---	---	5-10	---	---
Curlleaf mountainmahogany	CELE3	1-5	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	5-10	---	---
Black sagebrush	ARARN	---	---	---	---	---	1-5
Singleleaf pinyon	PIMO	1-5	---	---	---	---	1-5
Utah juniper	JUOS	---	---	---	---	---	1-5

Range site number:	028BY058NV	028BY046NV	028BY087NV	028BY015NV	None	028BY060NV
Potential production (lb/acre):						
Favorable years	500	1,200	900	1,500	---	500
Normal years	375	900	700	1,100	---	375
Unfavorable years	250	700	450	700	---	250

774-Cropper-Rubble land association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Cropper	Cropper, cool	Rubble land	1	2	3	4
Muttongrass	POFE	1-5	1-5	---	2-8	---	---	1-5
Bluebunch wheatgrass	AGSP	1-5	1-5	---	10-20	---	20-40	1-5
Basin wildrye	ELCI2	---	1-5	---	---	---	2-8	---
Canby bluegrass	POCA	---	1-5	---	---	---	---	1-5
Indian ricegrass	ORHY	---	---	---	2-5	---	---	1-5
Needlegrass	STIPA	---	---	---	5-10	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	---	15-30	1-5
Bluegrass	POA++	---	---	---	---	---	2-5	---
Crag aster	ASSC3	---	---	---	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
Mountain big sagebrush	ARVA2	1-5	1-5	---	15-25	---	15-25	---
Serviceberry	AMELA	---	1-5	---	---	---	---	1-5
Antelope bitterbrush	PUTR2	---	1-5	---	---	---	5-10	1-5
Snowberry	SYMPH	---	1-5	---	2-8	---	---	---
Curlleaf mountainmahogany	CELE3	---	1-5	---	30-50	---	---	---
Low sagebrush	ARAR8	---	---	---	---	---	---	1-5
Singleleaf pinyon	PIMO	1-5	1-5	---	---	---	---	1-5
Utah juniper	JUOS	---	---	---	---	---	---	1-5
Range site number:								
		028BY076NV	028BY058NV	None	028BY032NV	None	028BY087NV	028BY064NV
Potential production (lb/acre):								
Favorable years		500	500	---	1,300	---	900	500
Normal years		350	375	---	900	---	700	375
Unfavorable years		200	250	---	600	---	450	250

780-Bobs-Orr-Urmafot association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Bobs	Orr	Urmafot	1	2	3	4
Indian ricegrass	ORHY	20-30	---	5-15	---	---	1-5	1-5
Bluebunch wheatgrass	AGSP	10-15	---	15-30	---	30-40	1-5	---
Bluegrass	POA++	2-8	5-15	---	---	2-8	---	1-5
Thickspike wheatgrass	AGDA	---	5-15	---	---	---	---	---
Basin wildrye	ELCI2	---	20-40	---	60-70	2-10	1-5	1-5
Muttongrass	POFE	---	---	2-8	---	---	---	---
Needleandthread	STCO4	---	---	2-5	---	---	---	1-5
Nevada bluegrass	PONE3	---	---	---	5-10	---	---	---
Wheatgrass	AGROP2	---	---	---	5-10	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	10-20	1-5	---
Canby bluegrass	POCA	---	---	---	---	---	1-5	---
Bottlebrush squirreltail	SIHY	---	---	---	---	---	---	1-5
Thickstem cabbage	CACR11	---	---	---	---	---	---	1-5
Big sagebrush	ARTR2	25-35	10-20	---	---	---	---	---
Antelope bitterbrush	PUTR2	1-8	---	---	---	2-10	---	1-5
Rabbitbrush	CHRY9	---	2-5	---	---	---	---	---
Black sagebrush	ARARN	---	---	25-35	---	---	---	1-5
Shadscale	ATCO	---	---	2-5	---	---	---	---
Winterfat	EULA5	---	---	2-5	---	---	---	---
Mountain big sagebrush	ARVA2	---	---	---	5-15	20-25	1-5	---
Willow	SALIX	---	---	---	2-5	---	---	---
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5	---
Utah juniper	JUOS	---	---	---	---	---	1-5	1-5

Range site number: 028BY094NV 028BY082NV 028BY006NV 028BY024NV 028BY030NV 028BY062NV 028BY083NV

Potential production (lb/acre):

Favorable years	800	1,400	800	5,000	1,500	700	175
Normal years	600	1,100	600	2,500	1,200	500	125
Unfavorable years	400	900	400	1,500	900	300	75

783-Bobs very gravelly loam, 2 to 8 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Bobs	1	2	3	4
Indian ricegrass	ORHY	20-30	5-10	15-25	---	5-15
Bluebunch wheatgrass	AGSP	10-15	---	---	---	15-30
Bluegrass	POA++	2-8	---	---	---	---
Basin wildrye	ELCI2	---	10-20	---	70-80	---
Thickspike wheatgrass	AGDA	---	5-10	---	---	---
Sandberg bluegrass	POSE	---	---	2-10	---	---
Needleandthread	STCO4	---	---	5-15	---	2-5
Bottlebrush squirreltail	SIHY	---	---	2-5	---	---
Nevada bluegrass	PONE3	---	---	---	5-10	---
Muttongrass	POFE	---	---	---	---	2-8
Big sagebrush	ARTR2	25-35	---	---	---	---
Antelope bitterbrush	PUTR2	1-8	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---
Black sagebrush	ARARN	---	---	25-35	---	25-35
Downy rabbitbrush	CHVIP4	---	---	2-5	---	---
Basin big sagebrush	ARTRT	---	---	---	5-10	---
Shadscale	ATCO	---	---	---	---	2-5
Winterfat	EULA5	---	---	---	---	2-5

Range site number: 028BY094NV 028BY045NV 028BY011NV 028BY003NV 028BY006NV

Potential production (lb/acre):

Favorable years	800	1,000	600	5,000	800
Normal years	600	800	400	2,500	600
Unfavorable years	400	600	250	1,500	400

790-Bylo-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Bylo	Tulase	1	2	3	4
Bottlebrush squirreltail	SIHY	5-10	---	---	2-5	5-10	5-10
Indian ricegrass	ORHY	15-25	5-10	5-10	2-5	15-25	20-30
Basin wildrye	ELCI2	---	10-20	---	---	---	---
Thickspike wheatgrass	AGDA	---	5-10	---	---	---	---
Thurber needlegrass	STTH2	---	---	20-40	---	---	---
Needleandthread	STCO4	---	---	5-10	---	---	10-20
Bluegrass	POA++	---	---	2-5	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	---	2-5
Globemallow	SPHAE	2-5	---	---	---	2-5	---
Crag aster	ASSC3	---	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---
Winterfat	EULA5	40-50	---	---	---	40-50	---
Bud sagebrush	ARSP5	2-8	---	---	2-10	2-8	---
Wyoming big sagebrush	ARTRW	---	25-35	20-30	---	---	25-35
Spiny hopsage	GRSP	---	---	2-5	---	---	---
Shadscale	ATCO	---	---	---	20-50	---	---
Black greasewood	SAVE4	---	---	---	20-30	---	---
Rabbitbrush	CHRSY9	---	---	---	---	---	2-5

Range site number:	028BY013NV	028BY045NV	028BY086NV	028BY074NV	028BY013NV	028BY010NV
Potential production (lb/acre):						
Favorable years	700	1,000	800	600	700	800
Normal years	500	800	600	400	500	600
Unfavorable years	350	600	350	200	350	400

793-Bylo silt loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name	Inclusion number--		
		Bylo	1	2	3
Bottlebrush squirreltail	SIHY	5-10	5-10	5-10	5-10
Indian ricegrass	ORHY	15-25	20-30	20-30	20-30
Sandberg bluegrass	POSE	---	2-5	2-5	2-5
Needleandthread	STCO4	---	10-20	10-20	10-20
Globemallow	SPHAE	2-5	---	---	---
Winterfat	EULA5	40-50	---	---	---
Bud sagebrush	ARSP5	2-8	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	25-35	25-35
Rabbitbrush	CHRSY9	---	2-5	2-5	2-5

Range site number: 028BY013NV 028BY010NV 028BY010NV 028BY010NV

Potential production (lb/acre):

Favorable years	700	800	800	800
Normal years	500	600	600	600
Unfavorable years	350	400	400	400

800-Broland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Broland, less sloping	Broland, moderately steep	1	2	3	4
Indian ricegrass	ORHY	20-30	20-30	5-15	20-30	1-5	20-30
Thurber needlegrass	STTH2	15-25	15-25	---	---	---	15-25
Needleandthread	STCO4	2-8	2-8	2-5	10-20	1-5	2-8
Bluebunch wheatgrass	AGSP	---	---	20-40	---	---	---
Muttongrass	POFE	---	---	2-5	---	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	---	---
Bottlebrush squirreltail	SIHY	---	---	---	5-10	1-5	---
Basin wildrye	ELCI2	---	---	---	---	1-5	---
Bluegrass	POA++	---	---	---	---	1-5	---
Goldenweed	HAPLO2	---	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---
Thickstem cabbage	CACR11	---	---	---	---	1-5	---
Black sagebrush	ARARN	20-35	20-35	25-35	---	1-5	20-35
Winterfat	EULA5	---	---	2-5	---	---	---
Shadscale	ATCO	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	1-5	---
Utah juniper	JUOS	---	---	---	---	1-5	---

Range site number:	028BY089NV	028BY089NV	028BY008NV	028BY010NV	028BY083NV	028BY089NV
Potential production (lb/acre):						
Favorable years	450	450	600	800	175	450
Normal years	300	300	400	600	125	300
Unfavorable years	150	150	200	400	75	150

801-Broland very gravelly loam, 4 to 8 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Broland	1	2	3	4
Indian ricegrass	ORHY	20-30	20-30	5-10	10-20	20-30
Thurber needlegrass	STTH2	15-25	---	---	---	---
Needleandthread	STCO4	2-8	10-20	---	---	10-20
Sandberg bluegrass	POSE	---	2-5	---	---	2-5
Bottlebrush squirreltail	SIHY	---	5-10	---	5-15	5-10
Basin wildrye	ELCI2	---	---	10-20	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---
Globemallow	SPHAE	---	---	---	2-5	---
Black sagebrush	ARARN	20-35	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	25-35	---	25-35
Rabbitbrush	CHRSY9	---	2-5	---	---	2-5
Shadscale	ATCO	---	---	---	40-50	---
Bud sagebrush	ARSP5	---	---	---	10-15	---

Range site number: 028BY089NV 028BY010NV 028BY045NV 028BY017NV 028BY010NV

Potential production (lb/acre):

Favorable years	450	800	1,000	700	800
Normal years	300	600	800	400	600
Unfavorable years	150	400	600	250	400

802-Broland-Yody association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Broland	Yody	1	2	3
Indian ricegrass	ORHY	20-30	5-10	5-10	2-10	10-20
Thurber needlegrass	STTH2	15-25	20-40	---	---	---
Needleandthread	STCO4	2-8	5-10	---	2-10	10-20
Bluegrass	POA++	---	2-5	---	---	---
Basin wildrye	ELCI2	---	---	10-20	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---
Bottlebrush squirreltail	SIHY	---	---	---	2-5	2-5
Sandberg bluegrass	POSE	---	---	---	2-5	2-5
Crag aster	ASSC3	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---
Black sagebrush	ARARN	20-35	---	---	---	30-40
Wyoming big sagebrush	ARTRW	---	20-30	25-35	---	---
Spiny hopsage	GRSP	---	2-5	---	---	---
Pigmy sagebrush	ARPY2	---	---	---	50-70	---
Shadscale	ATCO	---	---	---	---	2-5

Range site number: 028BY089NV 028BY086NV 028BY045NV 028BY040NV 028BY016NV

Potential production (lb/acre):

Favorable years	450	800	1,000	250	400
Normal years	300	600	800	175	250
Unfavorable years	150	350	600	100	100

803-Broland-Broyles association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Broland	Broyles	1	2	3
Indian ricegrass	ORHY	20-30	35-45	20-30	35-45	15-25
Thurber needlegrass	STTH2	15-25	---	---	---	---
Needleandthread	STCO4	2-8	---	10-20	---	5-10
Bottlebrush squirreltail	SIHY	---	2-5	5-10	2-5	2-5
Sandberg bluegrass	POSE	---	5-10	2-5	5-10	---
Globemallow	SPHAE	---	1-5	---	1-5	---
Scarlet globemallow	SPCO	---	---	---	---	2-5
Black sagebrush	ARARN	20-35	---	---	---	---
Shadscale	ATCO	---	20-30	---	20-30	---
Winterfat	EULA5	---	5-10	---	5-10	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	25-35
Rabbitbrush	CHRSY9	---	---	2-5	---	---
Spiny hopsage	GRSP	---	---	---	---	15-25
Range site number:		028BY089NV	028BY075NV	028BY010NV	028BY075NV	028BY052NV
Potential production (lb/acre):						
Favorable years		450	700	800	700	700
Normal years		300	500	600	500	500
Unfavorable years		150	300	400	300	400

810-Yody-Fax association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Yody	Fax	1	2	3
Indian ricegrass	ORHY	5-10	2-5	15-25	20-30	2-5
Thurber needlegrass	STTH2	20-40	30-40	---	---	30-40
Needleandthread	STCO4	5-10	2-8	5-15	10-20	2-8
Bluegrass	POA++	2-5	2-8	---	---	2-8
Bluebunch wheatgrass	AGSP	---	5-10	---	---	5-10
Sandberg bluegrass	POSE	---	---	2-10	2-5	---
Bottlebrush squirreltail	SIHY	---	---	2-5	2-5	---
Crag aster	ASSC3	2-5	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	2-5	---	---	2-5
Arrowleaf balsamroot	BASA3	---	2-5	---	---	2-5
Wyoming big sagebrush	ARTRW	20-30	---	---	25-35	---
Spiny hopsage	GRSP	2-5	---	---	---	---
Big sagebrush	ARTR2	---	15-25	---	---	15-25
Antelope bitterbrush	PUTR2	---	2-10	---	---	2-10
Black sagebrush	ARARN	---	---	25-35	---	---
Downy rabbitbrush	CHVIP4	---	---	2-5	---	---

Range site number:	028BY086NV	028BY007NV	028BY011NV	028BY080NV	028BY007NV
Potential production (lb/acre):					
Favorable years	800	1,000	600	600	1,000
Normal years	600	800	400	400	800
Unfavorable years	350	600	250	200	600

830-Genaw-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Genaw	Tulase	1	2	3
Sandberg bluegrass	POSE	2-5	---	---	2-5	2-5
Needleandthread	STCO4	10-20	---	1-5	10-20	10-20
Indian ricegrass	ORHY	20-30	5-10	1-5	20-30	20-30
Bottlebrush squirreltail	SIHY	5-10	---	1-5	2-5	5-10
Basin wildrye	ELCI2	---	10-20	1-5	---	---
Thickspike wheatgrass	AGDA	---	5-10	---	---	---
Bluegrass	POA++	---	---	1-5	---	---
Thickstem cabbage	CACR11	---	---	1-5	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	25-35	25-35
Rabbitbrush	CHRSY9	2-5	---	---	---	2-5
Antelope bitterbrush	PUTR2	---	---	1-5	---	---
Black sagebrush	ARARN	---	---	1-5	---	---
Utah juniper	JUOS	---	---	1-5	---	---

Range site number:	028BY010NV	028BY045NV	028BY083NV	028BY080NV	028BY010NV
Potential production (lb/acre):					
Favorable years	800	1,000	175	600	800
Normal years	600	800	125	400	600
Unfavorable years	400	600	75	200	400

842-Orr-Fax association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Orr	Fax	1	2	3	4
Bluebunch wheatgrass	AGSP	5-10	5-10	---	---	---	15-25
Thurber needlegrass	STTH2	30-40	30-40	---	---	20-40	2-5
Bluegrass	POA++	2-8	2-8	---	---	2-5	---
Indian ricegrass	ORHY	2-5	2-5	20-30	15-25	5-10	2-5
Needleandthread	STCO4	2-8	2-8	---	5-15	5-10	---
Bottlebrush squirreltail	SIHY	---	---	10-20	2-5	---	---
Sandberg bluegrass	POSE	---	---	---	2-10	---	---
Idaho fescue	FEID	---	---	---	---	---	15-30
Western needlegrass	STOC2	---	---	---	---	---	2-5
Basin wildrye	ELCI2	---	---	---	---	---	2-5
Nevada bluegrass	PONE3	---	---	---	---	---	2-5
Tapertip hawksbeard	CRAC2	2-5	2-5	---	---	2-5	---
Arrowleaf balsamroot	BASA3	2-5	2-5	---	---	---	---
Globeamallow	SPHAE	---	---	2-5	---	---	---
Crag aster	ASSC3	---	---	---	---	2-5	---
Big sagebrush	ARTR2	15-25	15-25	---	---	---	---
Antelope bitterbrush	PUTR2	2-10	2-10	---	---	---	20-40
Shadscale	ATCO	---	---	50-60	---	---	---
Black sagebrush	ARARN	---	---	---	25-35	---	---
Downy rabbitbrush	CHVIP4	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	20-30	---
Spiny hopsage	GRSP	---	---	---	---	2-5	---
Snowberry	SYMPH	---	---	---	---	---	2-5
Serviceberry	AMELA	---	---	---	---	---	2-5
Mountain big sagebrush	ARVA2	---	---	---	---	---	2-10

Range site number:	028BY007NV	028BY007NV	028BY009NV	028BY011NV	028BY086NV	025XY007NV
Potential production (lb/acre):						
Favorable years	1,000	1,000	500	600	800	1,600
Normal years	800	800	400	400	600	1,300
Unfavorable years	600	600	300	250	350	800

850-Onkeyo-Pookaloo-Adobe association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Onkeyo	Pookaloo	Adobe	1	2	3	4
Bluegrass	POA++	5-10	1-5	---	5-10	---	---	---
Indian ricegrass	ORHY	10-20	1-5	---	2-5	---	1-5	5-15
Bluebunch wheatgrass	AGSP	30-40	1-5	60-80	30-40	20-30	1-5	20-40
Bottlebrush squirreltail	SIHY	---	1-5	---	---	---	---	---
Thurber needlegrass	STTH2	---	1-5	---	---	---	1-5	---
Muttongrass	POFE	---	---	2-10	---	---	---	2-5
Basin wildrye	ELCI2	---	---	---	2-8	---	1-5	---
Canby bluegrass	POCA	---	---	---	---	---	1-5	---
Needleandthread	STCO4	---	---	---	---	---	---	2-5
Goldenweed	HAPLO2	---	---	2-5	---	---	---	2-5
Tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Antelope bitterbrush	PUTR2	5-10	---	---	2-10	---	---	---
Mountain big sagebrush	ARVA2	15-25	---	---	15-25	15-25	1-5	---
Black sagebrush	ARARN	---	1-5	25-35	---	---	---	25-35
Snowberry	SYMPH	---	---	---	2-5	2-8	---	---
Utah serviceberry	AMUT	---	---	---	1-5	---	---	---
Winterfat	EULA5	---	---	---	---	---	---	2-5
Shadscale	ATCO	---	---	---	---	---	---	2-5
Utah juniper	JUOS	---	1-5	---	---	---	1-5	---
Singleleaf pinyon	PIMO	---	1-5	---	---	---	1-5	---
Curlleaf mountainmahogany	CELE3	---	---	---	---	15-25	---	---

Range site number: 028BY079NV 028BY060NV 028BY027NV 028BY088NV 028BY043NV 028BY062NV 028BY008NV

Potential production (lb/acre):

Favorable years	700	500	600	1,100	1,700	700	600
Normal years	500	375	450	900	1,300	500	400
Unfavorable years	300	250	300	700	900	300	200

851-Grink-Onkeyo-Xine association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Grink	Onkeyo	Xine	1	2	3	4
Bluebunch wheatgrass	AGSP	20-30	30-40	30-40	---	1-5	20-40	30-40
Bluegrass	POA++	---	5-10	5-10	---	1-5	---	5-10
Indian ricegrass	ORHY	---	10-20	2-5	---	1-5	5-15	2-5
Basin wildrye	ELCI2	---	---	2-8	---	---	---	2-8
Bottlebrush squirreltail	SIHY	---	---	---	---	1-5	---	---
Thurber needlegrass	STTH2	---	---	---	---	1-5	---	---
Needleandthread	STCO4	---	---	---	---	---	2-5	---
Muttongrass	POFE	---	---	---	---	---	2-5	---
Goldenweed	HAPLO2	---	---	---	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
Snowberry	SYMPH	2-8	---	2-5	---	---	---	2-5
Mountain big sagebrush	ARVA2	15-25	15-25	15-25	---	---	---	15-25
Antelope bitterbrush	PUTR2	---	5-10	2-10	---	---	---	2-10
Utah serviceberry	AMUT	---	---	1-5	---	---	---	1-5
Black sagebrush	ARARN	---	---	---	---	1-5	25-35	---
Winterfat	EULA5	---	---	---	---	---	2-5	---
Shadscale	ATCO	---	---	---	---	---	2-5	---
Curlleaf mountainmahogany	CELE3	15-25	---	---	---	---	---	---
Utah juniper	JUOS	---	---	---	---	1-5	---	---
Singleleaf pinyon	PIMO	---	---	---	---	1-5	---	---

Range site number: 028BY043NV 028BY079NV 028BY088NV None 028BY060NV 028BY008NV 028BY088NV

Potential production (lb/acre):

Favorable years	1,700	700	1,100	---	500	600	1,100
Normal years	1,300	500	900	---	375	400	900
Unfavorable years	900	300	700	---	250	200	700

852-Grink-Onkeyo-Halacan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Grink	Onkeyo	Halacan	1	2	3	4
Bluebunch wheatgrass	AGSP	20-30	30-40	40-60	1-5	---	20-30	1-5
Bluegrass	POA++	---	5-10	---	1-5	---	5-10	---
Indian ricegrass	ORHY	---	10-20	---	1-5	---	2-5	---
Muttongrass	POFE	---	---	5-10	---	---	---	1-5
Pine needlegrass	STPI2	---	---	2-8	---	---	---	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	---	---
Thurber needlegrass	STTH2	---	---	---	1-5	---	---	---
Spike-fescue	LEKI2	---	---	---	---	---	---	1-5
Goldenweed	HAPLO2	---	---	2-8	---	---	---	1-5
Creeping barberry	BERE	---	---	---	---	---	---	1-5
Snowberry	SYMPH	2-8	---	---	---	---	---	---
Mountain big sagebrush	ARVA2	15-25	15-25	---	---	---	5-15	1-5
Antelope bitterbrush	PUTR2	---	5-10	---	---	---	5-15	---
Black sagebrush	ARARN	---	---	30-40	1-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	---	30-40	---
Common juniper	JUCO6	---	---	---	---	---	---	1-5
Limber pine	PIFL2	---	---	---	---	---	---	1-5
White fir	ABCO	---	---	---	---	---	---	1-5
Bristlecone pine	PIAR	---	---	---	---	---	---	1-5
Curlleaf mountainmahogany	CELE3	15-25	---	---	---	---	---	---
Utah juniper	JUOS	---	---	---	1-5	---	---	---
Singleleaf pinyon	PIMO	---	---	---	1-5	---	---	---

Range site number:	028BY043NV	028BY079NV	028BY048NV	028BY060NV	None	028BY091NV	028BY063NV
Potential production (lb/acre):							
Favorable years	1,700	700	450	500	---	1,200	400
Normal years	1,300	500	300	375	---	900	275
Unfavorable years	900	300	150	250	---	700	150

870-Amelar-Eoj association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Amelar, gravelly	Eoj	Amelar, very gravelly	1	2	3	4
Bluebunch wheatgrass	AGSP	20-30	20-40	30-40	1-5	30-40	---	20-40
Indian ricegrass	ORHY	2-5	---	2-5	1-5	10-20	---	5-15
Bluegrass	POA++	5-10	10-20	5-10	1-5	5-10	2-5	---
Basin wildrye	ELCI2	---	---	2-8	---	---	30-50	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	---	---
Thurber needlegrass	STTH2	---	---	---	1-5	---	---	---
Western wheatgrass	AGSM	---	---	---	---	---	5-10	---
Alkali sacaton	SPAI	---	---	---	---	---	2-5	---
Needleandthread	STCO4	---	---	---	---	---	---	2-5
Muttongrass	POFE	---	---	---	---	---	---	2-5
Barestem biscuitroot	LONU2	---	2-5	---	---	---	---	---
Goldenweed	HAPLO2	---	---	---	---	---	---	2-5
Tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Antelope bitterbrush	PUTR2	5-15	2-5	2-10	---	5-10	---	---
Mountain big sagebrush	ARVA2	5-15	---	15-25	---	15-25	---	---
Utah serviceberry	AMUT	30-40	1-5	1-5	---	---	---	---
Low sagebrush	ARAR8	---	25-35	---	---	---	---	---
Snowberry	SYMPH	---	---	2-5	---	---	---	---
Black sagebrush	ARARN	---	---	---	1-5	---	---	25-35
Black greasewood	SAVE4	---	---	---	---	---	2-5	---
Rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5	---
Basin big sagebrush	ARTRT	---	---	---	---	---	5-15	---
Winterfat	EULA5	---	---	---	---	---	---	2-5
Shadscale	ATCO	---	---	---	---	---	---	2-5
Utah juniper	JUOB	---	---	---	1-5	---	---	---
Singleleaf pinyon	PIMO	---	---	---	1-5	---	---	---

Range site number: 028BY091NV 028BY092NV 028BY088NV 028BY060NV 028BY079NV 028BY041NV 028BY008NV

Potential production (lb/acre):

Favorable years	1,200	800	1,100	500	700	1,800	600
Normal years	900	600	900	375	500	1,500	400
Unfavorable years	700	400	700	250	300	1,100	200

871-Amelar-Urmafot association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Amelar	Urmafot	1	2	3
Bluebunch wheatgrass	AGSP	20-30	15-30	30-40	20-40	30-40
Indian ricegrass	ORHY	2-5	5-15	2-5	5-15	10-20
Bluegrass	POA++	5-10	---	5-10	---	5-10
Muttongrass	POFE	---	2-8	---	2-5	---
Needleandthread	STCO4	---	2-5	---	2-5	---
Basin wildrye	ELCI2	---	---	2-8	---	---
Goldenweed	HAPLO2	---	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	2-5	---
Antelope bitterbrush	PUTR2	5-15	---	2-10	---	5-10
Mountain big sagebrush	ARVA2	5-15	---	15-25	---	15-25
Utah serviceberry	AMUT	30-40	---	1-5	---	---
Black sagebrush	ARARN	---	25-35	---	25-35	---
Shadscale	ATCO	---	2-5	---	2-5	---
Winterfat	EULA5	---	2-5	---	2-5	---
Snowberry	SYMPH	---	---	2-5	---	---

Range site number: 028BY091NV 028BY006NV 028BY088NV 028BY008NV 028BY079NV

Potential production (lb/acre):

Favorable years	1,200	800	1,100	600	700
Normal years	900	600	900	400	500
Unfavorable years	700	400	700	200	300

874-Amelar-Pookaloo-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Amelar	Pookaloo	Tulase	1	2	3
Basin wildrye	ELCI2	2-8	---	10-20	---	20-40	---
Bluebunch wheatgrass	AGSP	30-40	1-5	---	20-30	---	20-30
Bluegrass	POA++	5-10	1-5	---	---	5-15	5-10
Indian ricegrass	ORHY	2-5	1-5	5-10	---	---	2-5
Bottlebrush squirreltail	SIHY	---	1-5	---	---	---	---
Thurber needlegrass	STTH2	---	1-5	---	---	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	5-15	---
Mountain big sagebrush	ARVA2	15-25	---	---	15-25	---	5-15
Antelope bitterbrush	PUTR2	2-10	---	---	---	---	5-15
Snowberry	SYMPH	2-5	---	---	2-8	---	---
Utah serviceberry	AMUT	1-5	---	---	---	---	30-40
Black sagebrush	ARARN	---	1-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---	---
Big sagebrush	ARTR2	---	---	---	---	10-20	---
Rabbitbrush	CHRY9	---	---	---	---	2-5	---
Utah juniper	JUOS	---	1-5	---	---	---	---
Singleleaf pinyon	PIMO	---	1-5	---	---	---	---
Curleaf mountainmahogany	CELE3	---	---	---	15-25	---	---

Range site number:	028BY088NV	028BY060NV	028BY045NV	028BY043NV	028BY082NV	028BY091NV
Potential production (lb/acre):						
Favorable years	1,100	500	1,000	1,700	1,400	1,200
Normal years	900	375	800	1,300	1,100	900
Unfavorable years	700	250	600	900	900	700

875-Amelar-Eoj-Hardol association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Amelar	Eoj	Hardol	1	2	3
Bluebunch wheatgrass	AGSP	20-30	20-40	15-30	30-40	60-80	10-20
Indian ricegrass	ORHY	2-5	---	---	10-20	---	2-5
Bluegrass	POA++	5-10	10-20	---	5-10	---	---
Slender wheatgrass	AGTR	---	---	5-10	---	---	---
Needlegrass	STIPA	---	---	15-30	---	---	5-10
Spike-fescue	LEKI2	---	---	5-10	---	---	---
Mountain brome	BRCA5	---	---	5-10	---	---	---
Muttongrass	POFE	---	---	---	---	2-10	2-8
Barestem biscuitroot	LONU2	---	2-5	---	---	---	---
Goldenweed	HAPLO2	---	---	---	---	2-5	---
Antelope bitterbrush	PUTR2	5-15	2-5	---	5-10	---	---
Mountain big sagebrush	ARVA2	5-15	---	15-25	15-25	---	15-25
Utah serviceberry	AMUT	30-40	1-5	1-5	---	---	---
Low sagebrush	ARAR8	---	25-35	---	---	---	---
Snowberry	SYMPH	---	---	2-8	---	---	2-8
Black sagebrush	ARARN	---	---	---	---	25-35	---
Curlleaf mountainmahogany	CELE3	---	---	---	---	---	30-50

Range site number:	028BY091NV	028BY092NV	028BY085NV	028BY079NV	028BY027NV	028BY032NV
Potential production (lb/acre):						
Favorable years	1,200	800	1,500	700	600	1,300
Normal years	900	600	1,100	500	450	900
Unfavorable years	700	400	700	300	300	600

876-Amelar-Xine-Halacan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Amelar	Xine	Halacan	1	2	3	4
Bluebunch wheatgrass	AGSP	20-30	30-40	40-60	40-60	20-30	60-80	20-30
Indian ricegrass	ORHY	2-5	2-5	---	---	2-5	---	---
Bluegrass	POA++	5-10	5-10	---	---	2-8	---	---
Basin wildrye	ELCI2	---	2-8	---	---	---	---	---
Muttongrass	POFE	---	---	5-10	5-10	---	2-10	---
Pine needlegrass	STPI2	---	---	2-8	2-8	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	10-20	---	---
Goldenweed	HAPLO2	---	---	2-8	2-8	---	2-5	---
Antelope bitterbrush	PUTR2	5-15	2-10	---	---	---	---	---
Mountain big sagebrush	ARVA2	5-15	15-25	---	---	---	---	15-25
Utah serviceberry	AMUT	30-40	1-5	---	---	---	---	---
Snowberry	SYMPH	---	2-5	---	---	---	---	2-8
Black sagebrush	ARARN	---	---	30-40	30-40	25-35	25-35	---
Douglas rabbitbrush	CHVI8	---	---	2-5	2-5	---	---	---
Curleaf mountainmahogany	CELE3	---	---	---	---	---	---	15-25

Range site number: 028BY091NV 028BY088NV 028BY048NV 028BY048NV 028BY093NV 028BY027NV 028BY043NV

Potential production (lb/acre):

Favorable years	1,200	1,100	450	450	800	600	1,700
Normal years	900	900	300	300	600	450	1,300
Unfavorable years	700	700	150	150	400	300	900

880-Wredah-Amelar-Orr association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Wredah	Amelar	Orr	1	2	3
Bluebunch wheatgrass	AGSP	5-10	30-40	5-10	1-5	10-15	---
Thurber needlegrass	STTH2	30-40	---	30-40	1-5	---	---
Bluegrass	POA++	2-8	5-10	2-8	1-5	2-8	---
Indian ricegrass	ORHY	2-5	2-5	2-5	1-5	20-30	---
Needleandthread	STCO4	2-8	---	2-8	---	---	---
Basin wildrye	ELCI2	---	2-8	---	---	---	70-80
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10
Tapertip hawksbeard	CRAC2	2-5	---	2-5	---	---	---
Arrowleaf balsamroot	BASA3	2-5	---	2-5	---	---	---
Big sagebrush	ARTR2	15-25	---	15-25	---	25-35	---
Antelope bitterbrush	PUTR2	2-10	2-10	2-10	---	1-8	---
Mountain big sagebrush	ARVA2	---	15-25	---	---	---	---
Snowberry	SYMPH	---	2-5	---	---	---	---
Utah serviceberry	AMUT	---	1-5	---	---	---	---
Black sagebrush	ARARN	---	---	---	1-5	---	---
Basin big sagebrush	ARTRT	---	---	---	---	---	5-10
Utah juniper	JUOS	---	---	---	1-5	---	---
Singleleaf pinyon	PIMO	---	---	---	1-5	---	---

Range site number:	028BY007NV	028BY088NV	028BY007NV	028BY060NV	028BY094NV	028BY003NV
Potential production (lb/acre):						
Favorable years	1,000	1,100	1,000	500	800	5,000
Normal years	800	900	800	375	600	2,500
Unfavorable years	600	700	600	250	400	1,500

900-Abgese-Roden-Orr association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Abgese	Roden	Orr	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	---	---	---
Needleandthread	STCO4	10-20	10-20	10-20	---	2-8	---	---
Indian ricegrass	ORHY	20-30	10-20	20-30	---	20-30	5-10	2-10
Bottlebrush squirreltail	SIHY	5-10	2-5	5-10	---	---	---	---
Bluegrass	POA++	---	---	---	2-10	---	---	---
Bluebunch wheatgrass	AGSP	---	---	---	20-30	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	15-25	---	---
Basin wildrye	ELCI2	---	---	---	---	---	10-20	10-20
Thickspike wheatgrass	AGDA	---	---	---	---	---	5-10	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---	25-35	---
Rabbitbrush	CHRSY9	2-5	---	2-5	---	---	---	---
Black sagebrush	ARARN	---	30-40	---	---	20-35	---	---
Shadscale	ATCO	---	2-5	---	---	---	---	---
Low sagebrush	ARAR8	---	---	---	25-35	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	2-5	---	---	---
Big sagebrush	ARTR2	---	---	---	---	---	---	20-30
Rubber rabbitbrush	CHNA2	---	---	---	---	---	---	2-5
Black greasewood	SAVE4	---	---	---	---	---	---	30-40

Range site number: 028BY010NV 028BY016NV 028BY010NV 028BY037NV 028BY089NV 028BY045NV 028BY028NV

Potential production (lb/acre):

Favorable years	800	400	800	800	450	1,000	800
Normal years	600	250	600	600	300	800	600
Unfavorable years	400	100	400	400	150	600	400

902-Abgese-Risley-Roden association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Abgese	Risley	Roden	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	2-5	---	2-5
Needleandthread	STCO4	10-20	10-20	1-5	10-20	10-20	---	10-20
Indian ricegrass	ORHY	20-30	20-30	1-5	20-30	20-30	15-25	20-30
Bottlebrush squirreltail	SIHY	5-10	5-10	1-5	5-10	5-10	5-10	5-10
Basin wildrye	ELCI2	---	---	1-5	---	---	---	---
Bluegrass	POA++	---	---	1-5	---	---	---	---
Thickstem cabbage	CACR11	---	---	1-5	---	---	---	---
Globemallow	SPHAE	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	25-35	25-35	---	25-35
Rabbitbrush	CHRSY9	2-5	2-5	---	2-5	2-5	---	2-5
Antelope bitterbrush	PUTR2	---	---	1-5	---	---	---	---
Black sagebrush	ARARN	---	---	1-5	---	---	---	---
Winterfat	EULA5	---	---	---	---	---	40-50	---
Bud sagebrush	ARSP5	---	---	---	---	---	2-8	---
Utah juniper	JUOS	---	---	1-5	---	---	---	---

Range site number: 028BY010NV 028BY010NV 028BY083NV 028BY010NV 028BY010NV 028BY013NV 028BY010NV

Potential production (lb/acre):

Favorable years	800	800	175	800	800	700	800
Normal years	600	600	125	600	600	500	600
Unfavorable years	400	400	75	400	400	350	400

911-Devilsgait-Duffer-Kunzler association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Devilsgait	Duffer	Kunzler	1	2	3	4
Western wheatgrass	AGSM	5-10	2-5	---	---	---	---	---
Bluegrass	POA++	2-5	---	---	---	---	25-40	---
Alkali sacaton	SPAI	2-5	30-40	---	40-50	---	---	5-10
Basin wildrye	ELCI2	30-50	30-60	10-20	---	70-80	---	2-5
Inland saltgrass	DISPS2	---	2-5	---	2-5	---	---	2-8
Indian ricegrass	ORHY	---	---	2-10	---	---	---	---
Alkali cordgrass	SPGR	---	---	---	10-15	---	---	---
Baltic rush	JUBA	---	---	---	2-8	---	10-15	---
Sedge	CAREX	---	---	---	5-10	---	20-30	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	---	---
Cinquefoil	POTEN	---	---	---	---	---	2-5	---
Groundsel	SENEC	---	---	---	---	---	2-5	---
Black greasewood	SAVE4	2-5	5-15	30-40	---	---	---	60-75
Rubber rabbitbrush	CHNA2	2-5	2-5	2-5	---	---	---	2-5
Basin big sagebrush	ARTRT	5-15	---	---	---	5-10	---	---
Big sagebrush	ARTR2	---	---	20-30	---	---	---	---
Shadscale	ATCO	---	---	---	---	---	---	2-5

Range site number: 028BY041NV 028BY004NV 028BY028NV 028BY002NV 028BY003NV 028BY001NV 028BY020NV

Potential production (lb/acre):

Favorable years	1,800	2,200	800	1,500	5,000	4,000	500
Normal years	1,500	1,500	600	1,000	2,500	2,000	300
Unfavorable years	1,100	800	400	700	1,500	1,200	150

913-Devilsgait silt loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Devilsgait	1	2	3	4
Sedge	CAREX	5-10	---	---	---	20-30
Wildrye	ELYMU	70-80	---	---	---	---
Nevada bluegrass	PONE3	5-10	---	5-10	---	---
Western wheatgrass	AGSM	---	5-10	---	---	---
Bluegrass	POA++	---	2-5	---	---	25-40
Alkali sacaton	SPAI	---	2-5	---	---	---
Basin wildrye	ELCI2	---	30-50	70-80	10-20	---
Indian ricegrass	ORHY	---	---	---	2-10	---
Baltic rush	JUBA	---	---	---	---	10-15
Cinquefoil	POTEN	---	---	---	---	2-5
Groundsel	SENEC	---	---	---	---	2-5
Willow	SALIX	5-10	---	---	---	---
Black greasewood	SAVE4	---	2-5	---	30-40	---
Rubber rabbitbrush	CHNA2	---	2-5	---	2-5	---
Basin big sagebrush	ARTRT	---	5-15	5-10	---	---
Big sagebrush	ARTR2	---	---	---	20-30	---

Range site number:	028BY081NV	028BY041NV	028BY003NV	028BY028NV	028BY001NV
Potential production (lb/acre):					
Favorable years	3,000	1,800	5,000	800	4,000
Normal years	2,500	1,500	2,500	600	2,000
Unfavorable years	1,800	1,100	1,500	400	1,200

920-Abgese-Yody-Shabliss association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Abgese	Yody	Shabliss	1	2
Sandberg bluegrass	POSE	2-5	---	2-5	2-10	---
Needleandthread	STCO4	10-20	5-10	10-20	5-15	---
Indian ricegrass	ORHY	20-30	5-10	20-30	15-25	5-10
Bottlebrush squirreltail	SIHY	5-10	---	2-5	2-5	---
Thurber needlegrass	STTH2	---	20-40	---	---	---
Bluegrass	POA++	---	2-5	---	---	---
Basin wildrye	ELCI2	---	---	---	---	10-20
Thickspike wheatgrass	AGDA	---	---	---	---	5-10
Crag aster	ASSC3	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	25-35	20-30	25-35	---	25-35
Rabbitbrush	CHRSY9	2-5	---	---	---	---
Spiny hopsage	GRSP	---	2-5	---	---	---
Black sagebrush	ARARN	---	---	---	25-35	---
Downy rabbitbrush	CHVIP4	---	---	---	2-5	---

Range site number:	028BY010NV	028BY086NV	028BY080NV	028BY011NV	028BY045NV
Potential production (lb/acre):					
Favorable years	800	800	600	600	1,000
Normal years	600	600	400	400	800
Unfavorable years	400	350	200	250	600

930-Tosser loam, 0 to 4 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Tosser	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	---
Bottlebrush squirreltail	SINHY	2-5	2-5	5-10	2-5	2-5
Indian ricegrass	ORHY	10-20	20-30	15-25	30-50	15-25
Needleandthread	STCO4	10-20	10-20	---	---	---
Bluegrass	POA++	---	---	---	---	2-5
Wheatgrass	AGROP2	---	---	---	---	5-10
Globemallow	SPHAE	---	---	2-5	---	---
Black sagebrush	ARARN	30-40	---	---	---	---
Shadscale	ATCO	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	30-35
Winterfat	EULA5	---	---	40-50	20-30	15-30
Bud sagebrush	ARSP5	---	---	2-8	2-8	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	2-5

Range site number: 028BY016NV 028BY080NV 028BY013NV 028BY084NV 028BY054NV

Potential production (lb/acre):					
Favorable years	400	600	700	900	600
Normal years	250	400	500	700	450
Unfavorable years	100	200	350	400	200

940-Nyak-Heist association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Nyak	Heist	1	2	3	4
Sandberg bluegrass	POSE	2-5	---	---	---	---	---
Needleandthread	STCO4	10-20	---	---	---	---	2-5
Indian ricegrass	ORHY	20-30	30-50	5-10	15-25	1-5	10-25
Bottlebrush squirreltail	SIHY	5-10	2-5	---	5-10	5-10	---
Basin wildrye	ELCI2	---	---	10-20	---	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	5-15
Globemallow	SPHAE	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---	---
Rabbitbrush	CHRSY9	2-5	---	---	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---
Bud sagebrush	ARSP5	---	2-8	---	2-8	---	---
Winterfat	EULA5	---	20-30	---	40-50	---	---
Shadscale	ATCO	---	---	---	---	70-90	---
Fourwing saltbush	ATCA2	---	---	---	---	---	5-15
Basin big sagebrush	ARTRT	---	---	---	---	---	30-40
Rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5
Spiny hopsage	GRSP	---	---	---	---	---	5-10

Range site number:	028BY010NV	028BY084NV	028BY045NV	028BY013NV	028BY073NV	028BY068NV
Potential production (lb/acre):						
Favorable years	800	900	1,000	700	500	800
Normal years	600	700	800	500	400	500
Unfavorable years	400	400	600	350	300	300

951-Nyak-Uwell-Pern association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Nyak	Uwell	Pern	1	2	3	4
Basin wildrye	ELCI2	10-20	10-20	70-80	---	---	---	---
Indian ricegrass	ORHY	5-10	5-10	---	20-30	15-25	20-30	---
Thickspike wheatgrass	AGDA	5-10	5-10	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	5-10	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	---	2-5	---
Needleandthread	STCO4	---	---	---	10-20	---	10-20	---
Bottlebrush squirreltail	SIHY	---	---	---	5-10	5-10	5-10	5-15
Bluegrass	POA++	---	---	---	---	---	---	5-10
Globemallow	SPHAE	---	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	25-35	---	25-35	60-70
Basin big sagebrush	ARTRT	---	---	5-10	---	---	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	2-5	---
Winterfat	EULA5	---	---	---	---	40-50	---	---
Bud sagebrush	ARSP5	---	---	---	---	2-8	---	---

Range site number: 028BY045NV 028BY045NV 028BY003NV 028BY010NV 028BY013NV 028BY010NV 028BY056NV

Potential production (lb/acre):							
Favorable years	1,000	1,000	5,000	800	700	800	450
Normal years	800	800	2,500	600	500	600	325
Unfavorable years	600	600	1,500	400	350	400	150

960-Doten-Bylo-Heist association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Doten	Bylo	Heist	1	2	3	4
Bottlebrush squirreltail	SIHY	2-5	5-10	2-5	5-10	2-5	---	2-5
Indian ricegrass	ORHY	5-15	15-25	30-50	15-25	5-15	---	5-15
Wheatgrass	AGROP2	20-30	---	---	---	20-30	---	20-30
Nevada bluegrass	PONE3	---	---	---	---	---	2-5	---
Western wheatgrass	AGSM	---	---	---	---	---	40-55	---
Basin wildrye	ELCI2	---	---	---	---	---	2-5	---
Globemallow	SPHAE	---	2-5	---	2-5	---	---	---
Winterfat	EULA5	40-50	40-50	20-30	40-50	40-50	---	40-50
Bud sagebrush	ARSP5	---	2-8	2-8	2-8	---	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---	---	---
Fourwing saltbush	ATCA2	---	---	---	---	---	30-40	---

Range site number:

028BY071NV 028BY013NV 028BY084NV 028BY013NV 028BY071NV 028BY023NV 028BY071NV

Potential production (lb/acre):

Favorable years	600	700	900	700	600	800	600
Normal years	400	500	700	500	400	600	400
Unfavorable years	200	350	400	350	200	400	200

970-Doten association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Doten	Doten, moist	1	2	3
Bottlebrush squirreltail	SIHY	5-10	2-5	5-10	---	---
Indian ricegrass	ORHY	15-25	5-15	1-5	---	---
Wheatgrass	AGROP2	---	20-30	---	---	---
Nevada bluegrass	PONE3	---	---	---	2-5	5-10
Western wheatgrass	AGSM	---	---	---	40-55	---
Basin wildrye	ELCI2	---	---	---	2-5	70-80
Globemallow	SPHAE	2-5	---	---	---	---
Winterfat	EULA5	40-50	40-50	---	---	---
Bud sagebrush	ARSP5	2-8	---	---	---	---
Shadscale	ATCO	---	---	70-90	---	---
Fourwing saltbush	ATCA2	---	---	---	30-40	---
Basin big sagebrush	ARTRT	---	---	---	---	5-10

Range site number: 028BY013NV 028BY071NV 028BY073NV 028BY023NV 028BY003NV

Potential production (lb/acre):

Favorable years	700	600	500	800	5,000
Normal years	500	400	400	600	2,500
Unfavorable years	350	200	300	400	1,500

981-Breko-Armespan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Breko	Armespan	1	2	3
Galleta	HIJA	2-5	2-8	2-5	---	---
Indian ricegrass	ORHY	15-25	15-25	20-40	20-30	2-10
Needleandthread	STCO4	10-20	5-15	2-5	10-20	---
Desert needlegrass	STSP3	2-8	2-5	---	---	---
Bottlebrush squirreltail	SIHY	2-8	1-5	---	5-10	---
Sandberg bluegrass	POSE	---	2-5	---	2-5	---
Dropseed	SPORO	---	---	2-5	---	---
Basin wildrye	ELCI2	---	---	---	---	10-20
Globeamallow	SPHAE	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	25-35	---	---	25-35	---
Fourwing saltbush	ATCA2	2-5	---	---	---	---
Nevada ephedra	EPNE	2-5	2-5	---	---	---
Black sagebrush	ARARN	---	25-35	---	---	---
Winterfat	EULA5	---	2-5	5-10	---	---
Shadscale	ATCO	---	---	15-30	---	---
Bud sagebrush	ARSP5	---	---	2-5	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---
Big sagebrush	ARTR2	---	---	---	---	20-30
Rubber rabbitbrush	CHNA2	---	---	---	---	2-5
Black greasewood	SAVE4	---	---	---	---	30-40

Range site number:	029XY006NV	029XY008NV	029XY090NV	028BY010NV	028BY028NV
Potential production (lb/acre):					
Favorable years	800	700	700	800	800
Normal years	600	500	500	600	600
Unfavorable years	300	250	300	400	400

982-Breko-Yody association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Breko	Yody	1	2	3
Galleta	HIJA	2-5	---	---	---	---
Indian ricegrass	ORHY	15-25	20-30	2-10	15-25	10-20
Needleandthread	STCO4	10-20	10-20	---	5-15	10-20
Desert needlegrass	STSP3	2-8	---	---	---	---
Bottlebrush squirreltail	SIHY	2-8	5-10	---	2-5	2-5
Sandberg bluegrass	POSE	---	2-5	---	2-10	2-5
Basin wildrye	ELCI2	---	---	10-20	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	---	---
Fourwing saltbush	ATCA2	2-5	---	---	---	---
Nevada ephedra	EPNE	2-5	---	---	---	---
Rabbitbrush	CHRSY9	---	2-5	---	---	---
Big sagebrush	ARTR2	---	---	20-30	---	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---	---
Black greasewood	SAVE4	---	---	30-40	---	---
Black sagebrush	ARARN	---	---	---	25-35	30-40
Downy rabbitbrush	CHVIP4	---	---	---	2-5	---
Shadscale	ATCO	---	---	---	---	2-5

Range site number:	029XY006NV	028BY010NV	028BY028NV	028BY011NV	028BY016NV
Potential production (lb/acre):					
Favorable years	800	800	800	600	400
Normal years	600	600	600	400	250
Unfavorable years	300	400	400	250	100

990-Blimo-Kunzler-Pern association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name			Inclusion number--
		Blimo	Kunzler	Pern	1
Wheatgrass	AGROP2	5-10	---	---	---
Indian ricegrass	ORHY	15-25	---	---	5-10
Bottlebrush squirreltail	SIHY	2-8	5-15	---	---
Sandberg bluegrass	POSE	2-5	---	---	---
Bluegrass	POA++	---	5-10	---	---
Basin wildrye	ELCI2	---	---	70-80	10-20
Nevada bluegrass	PONE3	---	---	5-10	---
Thickspike wheatgrass	AGDA	---	---	---	5-10
Douglas rabbitbrush	CHVI8	2-5	---	---	---
Winterfat	EULA5	5-15	---	---	---
Wyoming big sagebrush	ARTRW	30-40	60-70	---	25-35
Basin big sagebrush	ARTRT	---	---	5-10	---

Range site number:	028BY014NV	028BY056NV	028BY003NV	028BY045NV
Potential production (lb/acre):				
Favorable years	600	450	5,000	1,000
Normal years	450	325	2,500	800
Unfavorable years	200	150	1,500	600

991-Blimo-Zerk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Blimo	Zerk	1	2	3	4
Wheatgrass	AGROP2	5-10	---	---	---	---	---
Indian ricegrass	ORHY	15-25	30-50	---	2-10	---	15-25
Bottlebrush squirreltail	SIHY	2-8	2-5	5-15	---	---	5-10
Sandberg bluegrass	POSE	2-5	---	---	---	---	---
Bluegrass	POA++	---	---	5-10	---	---	---
Basin wildrye	ELCI2	---	---	---	10-20	70-80	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	---
Globemallow	SPHAE	---	---	---	---	---	2-5
Douglas rabbitbrush	CHVI8	2-5	2-5	---	---	---	---
Winterfat	EULA5	5-15	20-30	---	---	---	40-50
Wyoming big sagebrush	ARTRW	30-40	---	60-70	---	---	---
Bud sagebrush	ARSP5	---	2-8	---	---	---	2-8
Big sagebrush	ARTR2	---	---	---	20-30	---	---
Rubber rabbitbrush	CHNA2	---	---	---	2-5	---	---
Black greasewood	SAVE4	---	---	---	30-40	---	---
Basin big sagebrush	ARTRT	---	---	---	---	5-10	---

Range site number:	028BY014NV	028BY084NV	028BY056NV	028BY028NV	028BY003NV	028BY013NV
Potential production (lb/acre):						
Favorable years	600	900	450	800	5,000	700
Normal years	450	700	325	600	2,500	500
Unfavorable years	200	400	150	400	1,500	350

992-Blimo-Linoyer-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Blimo	Linoyer	Tulase	1	2	3
Wheatgrass	AGROP2	5-10	---	---	---	---	---
Indian ricegrass	ORHY	15-25	15-25	5-10	---	20-30	20-30
Bottlebrush squirreltail	SIHY	2-8	5-10	---	5-15	5-10	2-5
Sandberg bluegrass	POSE	2-5	---	---	---	2-5	2-5
Basin wildrye	ELCI2	---	---	10-20	---	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	---
Bluegrass	POA++	---	---	---	5-10	---	---
Needleandthread	STCO4	---	---	---	---	10-20	10-20
Globemallow	SPHAE	---	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---	---
Winterfat	EULA5	5-15	40-50	---	---	---	---
Wyoming big sagebrush	ARTRW	30-40	---	25-35	60-70	25-35	25-35
Bud sagebrush	ARSP5	---	2-8	---	---	---	---
Rabbitbrush	CHRSY9	---	---	---	---	2-5	---

Range site number:	028BY014NV	028BY013NV	028BY045NV	028BY056NV	028BY010NV	028BY080NV
Potential production (lb/acre):						
Favorable years	600	700	1,000	450	800	600
Normal years	450	500	800	325	600	400
Unfavorable years	200	350	600	150	400	200

1000-Linoyer-Unsel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name		Inclusion number--
		Linoyer	Unsel	1
Bottlebrush squirreltail	SIHY	5-10	---	2-5
Indian ricegrass	ORHY	15-25	20-40	30-50
Needleandthread	STCO4	---	2-5	---
Dropseed	SPORO	---	2-5	---
Galleta	HIJA	---	2-5	---
Globemallow	SPHAE	2-5	2-5	---
Winterfat	EULA5	40-50	5-10	20-30
Bud sagebrush	ARSP5	2-8	2-5	2-8
Shadscale	ATCO	---	15-30	---
Douglas rabbitbrush	CHVI8	---	---	2-5

Range site number: 028BY013NV 029XY090NV 028BY084NV

Potential production (lb/acre):

Favorable years	700	700	900
Normal years	500	500	700
Unfavorable years	350	300	400

1010-Hunnton-Chiara association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Hunnton	Chiara	1	2	3
Thurber needlegrass	STTH2	10-40	10-40	10-40	10-40	10-40
Bluegrass	POA++	2-5	2-5	2-5	2-5	2-5
Webber ricegrass	STWE	2-5	2-5	2-5	2-5	2-5
Indian ricegrass	ORHY	2-10	2-10	2-10	2-10	2-10
Bluebunch wheatgrass	AGSP	10-40	10-40	10-40	10-40	10-40
Globemallow	SPHAE	2-5	2-5	2-5	2-5	2-5

Range site number: 025XY019NV 025XY019NV 025XY019NV 025XY019NV 025XY019NV

Potential production (lb/acre):

Favorable years	800	800	800	800	800
Normal years	600	600	600	600	600
Unfavorable years	400	400	400	400	400

1012-Hunnton-Wieland-Kelk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Hunnton	Wieland	Kelk	1	2	3	4
Thurber needlegrass	STTH2	10-40	10-40	---	10-40	10-40	10-40	---
Bluegrass	POA++	2-5	2-5	---	2-5	2-5	2-5	---
Webber ricegrass	STWE	2-5	2-5	---	2-5	2-5	2-5	---
Indian ricegrass	ORHY	2-10	2-10	5-10	2-10	2-10	2-10	---
Bluebunch wheatgrass	AGSP	10-40	10-40	---	10-40	10-40	10-40	---
Basin wildrye	ELCI2	---	---	10-20	---	---	---	50-70
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	---	---
Mat muhly	MURI	---	---	---	---	---	---	2-10
Sedge	CAREX	---	---	---	---	---	---	1-5
Nevada bluegrass	PONE3	---	---	---	---	---	---	5-15
Globemallow	SPHAE	2-5	2-5	---	2-5	2-5	2-5	---
Lupine	LUPIN	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---	---	---
Basin big sagebrush	ARTRT	---	---	---	---	---	---	10-15
Rabbitbrush	CHRS9	---	---	---	---	---	---	2-5

Range site number: 025XY019NV 025XY019NV 028BY045NV 025XY019NV 025XY019NV 025XY019NV 025XY003NV

Potential production (lb/acre):

Favorable years	800	800	1,000	800	800	800	2,500
Normal years	600	600	800	600	600	600	1,900
Unfavorable years	400	400	600	400	400	400	1,200

1020-Sonoma-Kelk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Sonoma	Kelk	1	2	3
Basin wildrye	ELCI2	50-70	50-60	40-60	50-60	---
Mat muhly	MURI	2-10	---	---	---	---
Sedge	CAREX	1-5	---	---	---	20-30
Nevada bluegrass	PONE3	5-15	---	---	---	---
Sedge	CAREX	1-5	---	---	---	20-30
Basin wildrye	ELCI2	50-70	50-60	40-60	50-60	---
Western wheatgrass	AGSM	---	5-15	---	5-15	---
Inland saltgrass	DISPS2	---	---	5-10	---	---
Alkali sacaton	SPAI	---	---	15-30	---	---
Bluegrass	POA++	---	---	---	---	25-40
Baltic rush	JUBA	---	---	---	---	10-15
Lupine	LUPIN	2-5	---	---	---	---
Cinquefoil	POTEN	---	---	---	---	2-5
Groundsel	SENEC	---	---	---	---	2-5
Basin big sagebrush	ARTRT	10-15	15-20	---	15-20	---
Rabbitbrush	CHRY9	2-5	---	2-5	---	---
Black greasewood	SAVE4	---	2-10	5-15	2-10	---
Rubber rabbitbrush	CHNA2	---	2-5	---	2-5	---

Range site number: 025XY003NV 024XY006NV 024XY007NV 024XY006NV 028BY001NV

Potential production (lb/acre):

Favorable years	2,500	1,500	1,900	1,500	4,000
Normal years	1,900	1,100	1,400	1,100	2,000
Unfavorable years	1,200	600	800	600	1,200

1030-Chiara silt loam, 2 to 15 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name	Inclusion number--		
		Chiara	1	2	3
Thurber needlegrass	STTH2	10-40	---	10-40	10-40
Bluegrass	POA++	2-5	---	2-5	2-5
Webber ricegrass	STWE	2-5	---	2-5	2-5
Indian ricegrass	ORHY	2-10	20-30	2-10	2-10
Bluebunch wheatgrass	AGSP	10-40	---	10-40	10-40
Sandberg bluegrass	POSE	---	2-5	---	---
Needleandthread	STCO4	---	10-20	---	---
Bottlebrush squirreltail	SIHY	---	5-10	---	---
Globemallow	SPHAE	2-5	---	2-5	2-5
Wyoming big sagebrush	ARTRW	---	25-35	---	---
Rabbitbrush	CHRSY9	---	2-5	---	---

Range site number: 025XY019NV 028BY010NV 025XY019NV 025XY019NV

Potential production (lb/acre):

Favorable years	800	800	800	800
Normal years	600	600	600	600
Unfavorable years	400	400	400	400

1032-Chiara-Kelk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Chiara	Kelk, more sloping	Kelk, nearly level	1	2	3
Thurber needlegrass	STTH2	10-40	10-40	---	10-40	10-40	10-40
Bluegrass	POA++	2-5	2-5	---	2-5	2-5	2-5
Webber ricegrass	STWE	2-5	2-5	---	2-5	2-5	2-5
Indian ricegrass	ORHY	2-10	2-10	---	2-10	2-10	2-10
Bluebunch wheatgrass	AGSP	10-40	10-40	---	10-40	10-40	10-40
Western wheatgrass	AGSM	---	---	5-15	---	---	---
Basin wildrye	ELCI2	---	---	50-60	---	---	---
Globemallow	SPHAE	2-5	2-5	---	2-5	2-5	2-5
Black greasewood	SAVE4	---	---	2-10	---	---	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---	---	---
Basin big sagebrush	ARTRT	---	---	15-20	---	---	---

Range site number:	025XY019NV	025XY019NV	024XY006NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):						
Favorable years	800	800	1,500	800	800	800
Normal years	600	600	1,100	600	600	600
Unfavorable years	400	400	600	400	400	400

1050-Yody-Dewar association, cool

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Yody	Dewar	1	2	3
Thurber needlegrass	STTH2	10-40	10-40	10-40	---	10-40
Bluegrass	POA++	2-5	2-5	2-5	---	2-5
Webber ricegrass	STWE	2-5	2-5	2-5	---	2-5
Indian ricegrass	ORHY	2-10	2-10	2-10	---	2-10
Bluebunch wheatgrass	AGSP	10-40	10-40	10-40	---	10-40
Basin wildrye	ELCI2	---	---	---	70-80	---
Nevada bluegrass	PONE3	---	---	---	5-10	---
Globemallow	SPHAE	2-5	2-5	2-5	---	2-5
Basin big sagebrush	ARTRT	---	---	---	5-10	---

Range site number:	025XY019NV	025XY019NV	025XY019NV	028BY003NV	025XY019NV
Potential production (lb/acre):					
Favorable years	800	800	800	5,000	800
Normal years	600	600	600	2,500	600
Unfavorable years	400	400	400	1,500	400

1081-Bobs-Fax-Parisa association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Bobs	Fax	Parisa	1	2	3	4
Indian ricegrass	ORHY	20-30	2-5	20-30	2-5	2-5	20-30	5-10
Bluebunch wheatgrass	AGSP	10-15	5-10	---	5-10	5-10	---	---
Bluegrass	POA++	2-8	2-8	---	2-8	2-8	---	---
Thurber needlegrass	STTH2	---	30-40	---	30-40	30-40	---	---
Needleandthread	STCO4	---	2-8	10-20	2-8	2-8	10-20	---
Sandberg bluegrass	POSE	---	---	2-5	---	---	2-5	---
Bottlebrush squirreltail	SIHY	---	---	5-10	---	---	2-5	---
Basin wildrye	ELCI2	---	---	---	---	---	---	10-20
Thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
Tapertip hawksbeard	CRAC2	---	2-5	---	2-5	2-5	---	---
Arrowleaf balsamroot	BASA3	---	2-5	---	2-5	2-5	---	---
Big sagebrush	ARTR2	25-35	15-25	---	15-25	15-25	---	---
Antelope bitterbrush	PUTR2	1-8	2-10	---	2-10	2-10	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---	25-35	25-35
Rabbitbrush	CHRSY9	---	---	2-5	---	---	---	---

Range site number: 028BY094NV 028BY007NV 028BY010NV 028BY007NV 028BY007NV 028BY080NV 028BY045NV

Potential production (lb/acre):

Favorable years	800	1,000	800	1,000	1,000	600	1,000
Normal years	600	800	600	800	800	400	800
Unfavorable years	400	600	400	600	600	200	600

1090-Fax-Hunnton-Cassiro association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Fax	Hunnton	Cassiro	1	2	3	4
Bluebunch wheatgrass	AGSP	5-10	10-40	5-10	5-10	---	20-30	---
Thurber needlegrass	STTH2	30-40	10-40	30-40	30-40	---	---	---
Bluegrass	POA++	2-8	2-5	2-8	2-8	---	2-10	25-40
Indian ricegrass	ORHY	2-5	2-10	2-5	2-5	---	---	---
Needleandthread	STCO4	2-8	---	2-8	2-8	---	---	---
Webber ricegrass	STWE	---	2-5	---	---	---	---	---
Basin wildrye	ELCI2	---	---	---	---	50-70	---	---
Mat muhly	MURI	---	---	---	---	2-10	---	---
Sedge	CAREX	---	---	---	---	1-5	---	20-30
Nevada bluegrass	PONE3	---	---	---	---	5-15	---	---
Baltic rush	JUBA	---	---	---	---	---	---	10-15
Tapertip hawksbeard	CRAC2	2-5	---	2-5	2-5	---	---	---
Arrowleaf balsamroot	BASA3	2-5	---	2-5	2-5	---	---	---
Globemallow	SPHAE	---	2-5	---	---	---	---	---
Lupine	LUPIN	---	---	---	---	2-5	---	---
Cinquefoil	POTEN	---	---	---	---	---	---	2-5
Groundsel	SENEC	---	---	---	---	---	---	2-5
Big sagebrush	ARTR2	15-25	---	15-25	15-25	---	---	---
Antelope bitterbrush	PUTR2	2-10	---	2-10	2-10	---	2-5	---
Basin big sagebrush	ARTRT	---	---	---	---	10-15	---	---
Rabbitbrush	CHRY89	---	---	---	---	2-5	---	---
Low sagebrush	ARAR8	---	---	---	---	---	25-35	---

Range site number: 028BY007NV 025XY019NV 028BY007NV 028BY007NV 025XY003NV 028BY037NV 028BY001NV

Potential production (lb/acre):

Favorable years	1,000	800	1,000	1,000	2,500	800	4,000
Normal years	800	600	800	800	1,900	600	2,000
Unfavorable years	600	400	600	600	1,200	400	1,200

1120-Kunzler-Sycomat association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Kunzler	Sycomat	1	2	3	4
Basin wildrye	ELCI2	10-20	---	---	---	---	10-20
Indian ricegrass	ORHY	2-10	2-5	10-20	20-30	2-5	---
Bottlebrush squirreltail	SIHY	---	2-5	5-15	5-10	2-5	2-5
Sandberg bluegrass	POSE	---	---	---	2-5	---	---
Needleandthread	STCO4	---	---	---	10-20	---	---
Inland saltgrass	DISPS2	---	---	---	---	---	2-10
Globemallow	SPHAE	---	---	2-5	---	---	---
Thelypody	THELY	---	---	---	---	---	1-2
Big sagebrush	ARTR2	20-30	---	---	---	---	---
Rubber rabbitbrush	CHNA2	2-5	---	---	---	---	---
Black greasewood	SAVE4	30-40	20-30	---	---	20-30	50-60
Shadscale	ATCO	---	20-50	40-50	---	20-50	---
Bud sagebrush	ARSP5	---	2-10	10-15	---	2-10	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---

Range site number:	028BY028NV	028BY074NV	028BY017NV	028BY010NV	028BY074NV	028BY069NV
Potential production (lb/acre):						
Favorable years	800	600	700	800	600	800
Normal years	600	400	400	600	400	600
Unfavorable years	400	200	250	400	200	400

1122-Kunzler-Pern association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Kunzler	Pern	1	2	3	4
Basin wildrye	ELCI2	10-20	30-50	30-60	10-20	---	---
Indian ricegrass	ORHY	2-10	---	---	5-10	---	2-5
Western wheatgrass	AGSM	---	5-10	2-5	---	---	---
Bluegrass	POA++	---	2-5	---	---	---	---
Alkali sacaton	SPAI	---	2-5	30-40	---	---	---
Inland saltgrass	DISPS2	---	---	2-5	---	---	---
Thickspike wheatgrass	AGDA	---	---	---	5-10	---	---
Sedge	CAREX	---	---	---	---	5-10	---
Wildrye	ELYMU	---	---	---	---	70-80	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	---
Bottlebrush squirreltail	SIHY	---	---	---	---	---	2-5
Big sagebrush	ARTR2	20-30	---	---	---	---	---
Rubber rabbitbrush	CHNA2	2-5	2-5	2-5	---	---	---
Black greasewood	SAVE4	30-40	2-5	5-15	---	---	20-30
Basin big sagebrush	ARTRT	---	5-15	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Willow	SALIX	---	---	---	---	5-10	---
Shadscale	ATCO	---	---	---	---	---	20-50
Bud sagebrush	ARSP5	---	---	---	---	---	2-10

Range site number: 028BY028NV 028BY041NV 028BY004NV 028BY045NV 028BY081NV 028BY074NV

Potential production (lb/acre):

Favorable years	800	1,800	2,200	1,000	3,000	600
Normal years	600	1,500	1,500	800	2,500	400
Unfavorable years	400	1,100	800	600	1,800	200

1130-Duffer-Equis association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Duffer, moist	Duffer	Equis	1	2	3	4
Alkali cordgrass	SPGR	10-15	---	10-15	---	---	---	---
Alkali sacaton	SPAI	40-50	30-40	40-50	---	---	25-35	---
Baltic rush	JUBA	2-8	---	2-8	10-15	---	1-5	---
Inland saltgrass	DISPS2	2-5	2-5	2-5	---	---	2-10	2-10
Sedge	CAREX	5-10	---	5-10	20-30	---	---	---
Western wheatgrass	AGSM	---	2-5	---	---	---	---	---
Basin wildrye	ELCI2	---	30-60	---	---	10-20	---	10-20
Bluegrass	POA++	---	---	---	25-40	---	---	---
Indian ricegrass	ORHY	---	---	---	---	2-10	---	---
Bottlebrush squirreltail	SIHY	---	---	---	---	---	---	2-5
Cinquefoil	POTEN	---	---	---	2-5	---	---	---
Groundsel	SENEC	---	---	---	2-5	---	---	---
Thelypody	THELY	---	---	---	---	---	---	1-2
Rubber rabbitbrush	CHNA2	---	2-5	---	---	2-5	---	---
Black greasewood	SAVE4	---	5-15	---	---	30-40	5-10	50-60
Big sagebrush	ARTR2	---	---	---	---	20-30	---	---
Seepweed	SUAED	---	---	---	---	---	5-10	---
Alkali rabbitbrush	CHAL9	---	---	---	---	---	1-5	---
Basin big sagebrush	ARTRT	---	---	---	---	---	1-5	---
Torrey quailbush	ATTO	---	---	---	---	---	1-5	---

Range site number: 028BY002NV 028BY004NV 028BY002NV 028BY001NV 028BY028NV 029XY004NV 028BY069NV

Potential production (lb/acre):

Favorable years	1,500	2,200	1,500	4,000	800	2,000	800
Normal years	1,000	1,500	1,000	2,000	600	1,400	600
Unfavorable years	700	800	700	1,200	400	600	400

1131-Duffer-Devilsgait association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Duffer, moist	Devilsgait	Duffer	1	2
Alkali cordgrass	SPGR	10-15	---	---	---	---
Alkali sacaton	SPAI	40-50	---	30-40	---	---
Baltic rush	JUBA	2-8	10-15	---	---	---
Inland saltgrass	DISPS2	2-5	---	2-5	2-10	---
Sedge	CAREX	5-10	20-30	---	---	---
Bluegrass	POA++	---	25-40	---	---	---
Western wheatgrass	AGSM	---	---	2-5	---	---
Basin wildrye	ELCI2	---	---	30-60	10-20	10-20
Bottlebrush squirreltail	SIHY	---	---	---	2-5	---
Indian ricegrass	ORHY	---	---	---	---	2-10
Cinquefoil	POTEN	---	2-5	---	---	---
Groundsel	SENEC	---	2-5	---	---	---
Thelypody	THELY	---	---	---	1-2	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---	2-5
Black greasewood	SAVE4	---	---	5-15	50-60	30-40
Big sagebrush	ARTR2	---	---	---	---	20-30

Range site number:	028BY002NV	028BY001NV	028BY004NV	028BY069NV	028BY028NV
Potential production (lb/acre):					
Favorable years	1,500	4,000	2,200	800	800
Normal years	1,000	2,000	1,500	600	600
Unfavorable years	700	1,200	800	400	400

1132-Duffer silt loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Duffer	1	2	3	4
Alkali sacaton	SPAI	30-40	40-50	---	---	---
Inland saltgrass	DISPS2	2-5	2-5	---	---	---
Western wheatgrass	AGSM	2-5	---	---	---	---
Basin wildrye	ELCI2	30-60	---	10-20	---	---
Alkali cordgrass	SPGR	---	10-15	---	---	---
Baltic rush	JUBA	---	2-8	---	---	10-15
Sedge	CAREX	---	5-10	---	---	20-30
Indian ricegrass	ORHY	---	---	2-10	2-5	---
Bottlebrush squirreltail	SIHY	---	---	---	2-5	---
Bluegrass	POA++	---	---	---	---	25-40
Cinquefoil	POTEN	---	---	---	---	2-5
Groundsel	SENEC	---	---	---	---	2-5
Rubber rabbitbrush	CHNA2	2-5	---	2-5	---	---
Black greasewood	SAVE4	5-15	---	30-40	20-30	---
Big sagebrush	ARTR2	---	---	20-30	---	---
Shadscale	ATCO	---	---	---	20-50	---
Bud sagebrush	ARSP5	---	---	---	2-10	---

Range site number:	028BY004NV	028BY002NV	028BY028NV	028BY074NV	028BY001NV
Potential production (lb/acre):					
Favorable years	2,200	1,500	800	600	4,000
Normal years	1,500	1,000	600	400	2,000
Unfavorable years	800	700	400	200	1,200

1141-Shabliss-Pyrat association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Shabliss	Pyrat	1	2	3	4
Needleandthread	STCO4	10-20	10-20	5-15	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	2-10	---	2-5	---
Indian ricegrass	ORHY	20-30	20-30	15-25	5-10	15-25	2-10
Bottlebrush squirreltail	SIHY	2-5	5-10	2-5	---	2-8	---
Basin wildrye	ELCI2	---	---	---	10-20	---	10-20
Thickspike wheatgrass	AGDA	---	---	---	5-10	---	---
Wheatgrass	AGROP2	---	---	---	---	5-10	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	25-35	30-40	---
Rabbitbrush	CHRSY9	---	2-5	---	---	---	---
Black sagebrush	ARARN	---	---	25-35	---	---	---
Downy rabbitbrush	CHVIP4	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---
Winterfat	EULA5	---	---	---	---	5-15	---
Big sagebrush	ARTR2	---	---	---	---	---	20-30
Rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5
Black greasewood	SAVE4	---	---	---	---	---	30-40

Range site number:	028BY080NV	028BY010NV	028BY011NV	028BY045NV	028BY014NV	028BY028NV
Potential production (lb/acre):						
Favorable years	600	800	600	1,000	600	800
Normal years	400	600	400	800	450	600
Unfavorable years	200	400	250	600	200	400

1151-Zimbob-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Zimbob, less sloping	Zimbob, steep	Rock outcrop	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-5	2-5	---
Bottlebrush squirreltail	SIHY	2-5	2-5	---	2-5	2-5	---	---
Indian ricegrass	ORHY	10-20	10-20	---	30-50	15-25	5-10	5-10
Needleandthread	STCO4	10-20	10-20	---	---	---	15-30	---
Pine needlegrass	STPI2	---	---	---	---	2-5	---	---
Bluebunch wheatgrass	AGSP	---	---	---	---	2-5	---	---
Galleta	HIJA	---	---	---	---	---	2-5	---
Basin wildrye	ELCI2	---	---	---	---	---	---	10-20
Thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
Black sagebrush	ARARN	30-40	30-40	---	---	40-50	35-45	---
Shadscale	ATCO	2-5	2-5	---	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	2-5	---	---
Bud sagebrush	ARSP5	---	---	---	2-8	---	---	---
Winterfat	EULA5	---	---	---	20-30	---	1-5	---
Nevada ephedra	EPNE	---	---	---	---	---	5-10	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	25-35
Utah juniper	JUOS	---	---	---	---	1-3	---	---

Range site number:	028BY016NV	028BY016NV	None	028BY084NV	028BY059NV	029XY014NV	028BY045NV
Potential production (lb/acre):							
Favorable years	400	400	---	900	400	400	1,000
Normal years	250	250	---	700	350	275	800
Unfavorable years	100	100	---	400	125	100	600

1152-Zimbob-Eaglepass association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Zimbob	Zimbob, very shallow	Eaglepass	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-5	2-5	---
Bottlebrush squirreltail	SIHY	2-5	2-5	---	---	---	5-10	2-8
Indian ricegrass	ORHY	10-20	15-25	2-5	---	2-5	20-30	15-25
Needleandthread	STCO4	10-20	---	5-15	---	---	10-20	---
Pine needlegrass	STPI2	---	2-5	---	---	---	---	---
Bluebunch wheatgrass	AGSP	---	2-5	---	---	---	---	---
Needlegrass	STIPA	---	---	2-5	---	---	---	---
Galleta	HIJA	---	---	---	---	1-3	---	5-10
Beardless wheatgrass	AGSPI	---	---	---	---	40-55	---	---
Black sagebrush	ARARN	30-40	40-50	10-20	---	30-40	---	---
Shadscale	ATCO	2-5	---	---	---	---	---	40-50
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---	---
Nevada greasewood	FONE2	---	---	1-3	---	---	---	---
Littleleaf mountainmahogany	CEIN7	---	---	40-60	---	---	---	---
Ephedra	EPHED	---	---	2-8	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	---
Rabbitbrush	CHRSY9	---	---	---	---	---	2-5	---
Bailey greasewood	SAVEB	---	---	---	---	---	---	0-10
Winterfat	EULA5	---	---	---	---	---	---	5-10
Bud sagebrush	ARSP5	---	---	---	---	---	---	5-15
Nevada ephedra	EPNE	---	---	---	---	---	---	1-5
Utah juniper	JUOS	---	1-3	---	---	---	---	---

Range site number: 028BY016NV 028BY059NV 029XY040NV None 029XY028NV 028BY010NV 029XY017NV

Potential production (lb/acre):

Favorable years	400	400	600	---	700	800	500
Normal years	250	350	450	---	400	600	350
Unfavorable years	100	125	300	---	250	400	200

1171-Haunchee-Hardol-Halacan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Haunchee	Hardol	Halacan	1	2	3
Bluebunch wheatgrass	AGSP	20-30	15-30	40-60	---	30-40	1-5
Slender wheatgrass	AGTR	---	5-10	---	---	---	---
Needlegrass	STIPA	---	15-30	---	---	---	---
Spike-fescue	LEKI2	---	5-10	---	---	---	---
Mountain brome	BRCA5	---	5-10	---	---	---	---
Muttongrass	POFE	---	---	5-10	---	---	---
Pine needlegrass	STPI2	---	---	2-8	---	---	---
Bluegrass	POA++	---	---	---	---	5-10	---
Indian ricegrass	ORHY	---	---	---	---	10-20	1-5
Canby bluegrass	POCA	---	---	---	---	---	1-5
Thurber needlegrass	STTH2	---	---	---	---	---	1-5
Basin wildrye	ELCI2	---	---	---	---	---	1-5
Goldenweed	HAPLO2	---	---	2-8	---	---	---
Snowberry	SYMPH	2-8	2-8	---	---	---	---
Mountain big sagebrush	ARVA2	15-25	15-25	---	---	15-25	1-5
Utah serviceberry	AMUT	---	1-5	---	---	---	---
Black sagebrush	ARARN	---	---	30-40	---	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	5-10	---
Curlleaf mountainmahogany	CELE3	15-25	---	---	---	---	---
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5
Utah juniper	JUOS	---	---	---	---	---	1-5

Range site number:	028BY043NV	028BY085NV	028BY048NV	None	028BY079NV	028BY062NV
Potential production (lb/acre):						
Favorable years	1,700	1,500	450	---	700	700
Normal years	1,300	1,100	300	---	500	500
Unfavorable years	900	700	150	---	300	300

1173-Haunchee-Hardol-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Haunchee	Hardol	Rock outcrop	1	2	3
Bluebunch wheatgrass	AGSP	10-20	5-10	---	1-5	60-80	1-5
Indian ricegrass	ORHY	2-5	2-5	---	---	---	---
Needlegrass	STIPA	5-10	---	---	---	---	---
Muttongrass	POFE	2-8	---	---	1-5	---	---
Bluegrass	POA++	---	5-10	---	---	---	---
Thurber needlegrass	STTH2	---	1-8	---	---	---	---
Bottlebrush squirreltail	SIHY	---	2-5	---	---	---	---
Spike-fescue	LEKI2	---	---	---	1-5	1-10	---
Canby bluegrass	POCA	---	---	---	---	5-15	---
Mountain brome	BRCA	---	---	---	---	---	1-5
Slender wheatgrass	AGTR	---	---	---	---	---	1-5
Sedge	CAREX	---	---	---	---	---	1-5
Columbia needlegrass	STNE3	---	---	---	---	---	---
Goldenweed	HAPLO2	---	---	---	1-5	---	---
Creeping barberry	BERE	---	---	---	1-5	---	---
Horsemint giant hyssop	AGUR	---	---	---	---	---	1-5
Mountain big sagebrush	ARVA2	15-25	---	---	1-5	10-20	1-5
Snowberry	SYMPH	2-8	---	---	---	2-8	1-5
Common juniper	JUCO6	---	---	---	1-5	---	---
Limber pine	PIFL2	---	---	---	1-5	---	---
White fir	ABCO	---	---	---	1-5	---	---
Bristlecone pine	PIAR	---	---	---	---	---	1-5
Currant	RIBES	---	---	---	---	---	---
Curlleaf mountainmahogany	CELE3	30-50	50-70	---	---	---	---
Quaking aspen	POTRT	---	---	---	---	---	1-5

Range site number:	028BY032NV	028BY042NV	None	028BY063NV	028BY070NV	028BY067NV
Potential production (lb/acre):						
Favorable years	1,300	3,000	---	400	1,100	800
Normal years	900	2,400	---	275	900	600
Unfavorable years	600	1,700	---	150	600	400

1174-Haunchee-Wardbay-Hardzem association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Haunchee	Wardbay	Hardzem	1	2	3	4
Bluebunch wheatgrass	AGSP	10-20	60-80	1-5	1-5	15-30	---	---
Indian ricegrass	ORHY	2-5	---	---	---	---	---	---
Needlegrass	STIPA	5-10	---	---	---	15-30	---	---
Muttongrass	POFE	2-8	---	1-5	1-5	---	---	---
Spike-fescue	LEKI2	---	1-10	1-5	1-5	5-10	---	---
Canby bluegrass	POCA	---	5-15	---	---	---	---	---
Letterman needlegrass	STLE4	---	---	---	1-5	---	---	50-70
Slender wheatgrass	AGTR	---	---	---	---	5-10	---	---
Mountain brome	BRCA5	---	---	---	---	5-10	---	---
Bluegrass	POA++	---	---	---	---	---	---	2-10
Goldenweed	HAPLO2	---	---	1-5	1-5	---	---	---
Creeping barberry	BERE	---	---	1-5	1-5	---	---	---
Lupine	LUPIN	---	---	---	---	---	---	2-8
Penstemon	PENST	---	---	---	---	---	---	2-5
Mountain big sagebrush	ARVA2	15-25	10-20	1-5	1-5	15-25	---	---
Snowberry	SYMPH	2-8	2-8	---	---	2-8	---	---
Common juniper	JUCO6	---	---	1-5	---	---	---	---
Limber pine	PIFL2	---	---	1-5	1-5	---	---	---
White fir	ABCO	---	---	1-5	1-5	---	---	---
Bristlecone pine	PIAR	---	---	1-5	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	1-5	---	---
Curlleaf mountainmahogany	CELE3	30-50	---	---	---	---	---	---

Range site number: 028BY032NV 028BY070NV 028BY063NV 028BY049NV 028BY085NV None 028BY051NV

Potential production (lb/acre):

Favorable years	1,300	1,100	400	1,200	1,500	---	700
Normal years	900	900	275	1,000	1,100	---	500
Unfavorable years	600	600	150	800	700	---	300

1175-Haunchee-Hardol-Hardzem association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Haunchee	Hardol	Hardzem	1	2	3	4
Bluebunch wheatgrass	AGSP	10-20	5-10	1-5	15-30	60-80	---	1-5
Indian ricegrass	ORHY	2-5	2-5	---	---	---	---	1-5
Needlegrass	STIPA	5-10	---	---	15-30	---	---	---
Muttongrass	POFE	2-8	---	1-5	---	---	---	---
Bluegrass	POA++	---	5-10	---	---	---	---	1-5
Thurber needlegrass	STTH2	---	1-8	---	---	---	---	1-5
Bottlebrush squirreltail	SIHY	---	2-5	---	---	---	---	1-5
Spike-fescue	LEKI2	---	---	1-5	5-10	1-10	---	---
Slender wheatgrass	AGTR	---	---	---	5-10	---	---	---
Mountain brome	BRCA5	---	---	---	5-10	---	---	---
Canby bluegrass	POCA	---	---	---	---	5-15	---	---
Goldenweed	HAPLO2	---	---	1-5	---	---	---	---
Creeping barberry	BERE	---	---	1-5	---	---	---	---
Mountain big sagebrush	ARVA2	15-25	---	1-5	15-25	10-20	---	---
Snowberry	SYMPH	2-8	---	---	2-8	2-8	---	---
Common juniper	JUCO6	---	---	1-5	---	---	---	---
Limber pine	PIFL2	---	---	1-5	---	---	---	---
White fir	ABCO	---	---	1-5	---	---	---	---
Bristlecone pine	PIAR	---	---	1-5	---	---	---	---
Utah serviceberry	AMUT	---	---	---	1-5	---	---	---
Black sagebrush	ARARN	---	---	---	---	---	---	1-5
Curlleaf mountainmahogany	CELE3	30-50	50-70	---	---	---	---	---
Utah juniper	JUOS	---	---	---	---	---	---	1-5
Singleleaf pinyon	PIMO	---	---	---	---	---	---	1-5

Range site number:	028BY032NV	028BY042NV	028BY063NV	028BY085NV	028BY070NV	None	028BY060NV
Potential production (lb/acre):							
Favorable years	1,300	3,000	400	1,500	1,100	---	500
Normal years	900	2,400	275	1,100	900	---	375
Unfavorable years	600	1,700	150	700	600	---	250

1176-Haunchee-Hardzem-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Haunchee	Hardzem	Rock outcrop	1	2	3
Bluebunch wheatgrass	AGSP	10-20	1-5	---	5-10	1-5	60-80
Indian ricegrass	ORHY	2-5	---	---	2-5	---	---
Needlegrass	STIPA	5-10	---	---	---	---	---
Muttongrass	POFE	2-8	1-5	---	---	---	---
Spike-fescue	LEKI2	---	1-5	---	---	1-5	1-10
Bluegrass	POA++	---	---	---	5-10	---	---
Thurber needlegrass	STTH2	---	---	---	1-8	---	---
Bottlebrush squirreltail	SIHY	---	---	---	2-5	---	---
Letterman needlegrass	STLE4	---	---	---	---	1-5	---
Slender wheatgrass	AGTR	---	---	---	---	1-5	---
Nevada bluegrass	PONE3	---	---	---	---	1-5	---
Sedge	CAREX	---	---	---	---	1-5	---
Mountain brome	BRCA5	---	---	---	---	1-5	---
Canby bluegrass	POCA	---	---	---	---	---	5-15
Goldenweed	HAPLO2	---	1-5	---	---	---	---
Creeping barberry	BERE	---	1-5	---	---	1-5	---
Mountain big sagebrush	ARVA2	15-25	1-5	---	---	---	10-20
Snowberry	SYMPH	2-8	---	---	---	1-5	2-8
Common juniper	JUCO6	---	1-5	---	---	1-5	---
Limber pine	PIFL2	---	1-5	---	---	---	---
White fir	ABCO	---	1-5	---	---	1-5	---
Bristlecone pine	PIAR	---	1-5	---	---	---	---
Serviceberry	AMELA	---	---	---	---	1-5	---
Curleaf mountainmahogany	CELE3	30-50	---	---	50-70	---	---
Quaking aspen	POTRT	---	---	---	---	1-5	---

Range site number:	028BY032NV	028BY063NV	None	028BY042NV	028BY055NV	028BY070NV
Potential production (lb/acre):						
Favorable years	1,300	400	---	3,000	600	1,100
Normal years	900	275	---	2,400	425	900
Unfavorable years	600	150	---	1,700	250	600

1178-Haunchee-Hardol-Xine association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Haunchee	Hardol	Xine	1	2	3
Bluebunch wheatgrass	AGSP	10-20	15-30	30-40	1-5	---	20-30
Indian ricegrass	ORHY	2-5	---	2-5	---	---	---
Needlegrass	STIPA	5-10	15-30	---	---	---	---
Muttongrass	POFE	2-8	---	---	1-5	---	---
Slender wheatgrass	AGTR	---	5-10	---	---	---	---
Spike-fescue	LEKI2	---	5-10	---	1-5	---	---
Mountain brome	BRCAS	---	5-10	---	---	---	---
Basin wildrye	ELCI2	---	---	2-8	---	---	---
Bluegrass	POA++	---	---	5-10	---	---	---
Goldenweed	HAPLO2	---	---	---	1-5	---	---
Creeping barberry	BERE	---	---	---	1-5	---	---
Mountain big sagebrush	ARVA2	15-25	15-25	15-25	1-5	---	15-25
Snowberry	SYMPH	2-8	2-8	2-5	---	---	2-8
Utah serviceberry	AMUT	---	1-5	1-5	---	---	---
Antelope bitterbrush	PUTR2	---	---	2-10	---	---	---
Common juniper	JUCO6	---	---	---	1-5	---	---
Limber pine	PIFL2	---	---	---	1-5	---	---
White fir	ABCO	---	---	---	1-5	---	---
Bristlecone pine	PIAR	---	---	---	---	---	15-25
Curlleaf mountainmahogany	CELE3	30-50	---	---	---	---	---
Range site number:		028BY032NV	028BY085NV	028BY088NV	028BY063NV	None	028BY043NV
Potential production (lb/acre):							
Favorable years		1,300	1,500	1,100	400	---	1,700
Normal years		900	1,100	900	275	---	1,300
Unfavorable years		600	700	700	150	---	900

1180-Eoj-McIvey association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Eoj, moderately steep	Eoj, less sloping	McIvey	1	2	3	4
Bluegrass	POA++	2-10	2-10	2-8	5-10	---	---	---
Bluebunch wheatgrass	AGSP	20-30	20-30	30-40	20-40	---	1-5	2-5
Basin wildrye	ELCI2	---	---	2-10	---	---	1-5	---
Thurber needlegrass	STTH2	---	---	10-20	10-15	---	1-5	---
Pine needlegrass	STPI2	---	---	---	2-8	---	---	---
Canby bluegrass	POCA	---	---	---	---	---	1-5	---
Indian ricegrass	ORHY	---	---	---	---	---	1-5	---
Letterman needlegrass	STLE4	---	---	---	---	---	---	2-5
Idaho fescue	FEID	---	---	---	---	---	---	2-10
Slender wheatgrass	AGTR	---	---	---	---	---	---	5-15
Mountain brome	BRCA5	---	---	---	---	---	---	5-15
Bulbous oniongrass	MEBU	---	---	---	---	---	---	2-5
Nevada bluegrass	PONE3	---	---	---	---	---	---	2-5
Spike-fescue	LEKI2	---	---	---	---	---	---	2-5
Blue wildrye	ELGL	---	---	---	---	---	---	2-5
Goldenweed	HAPLO2	---	---	---	2-5	---	---	---
Groundsel	SENEC	---	---	---	---	---	---	2-10
Carrotleaf lomatium	LODIM	---	---	---	---	---	---	2-5
Clover	TRIFO	---	---	---	---	---	---	2-5
Horsemint giant hyssop	AGUR	---	---	---	---	---	---	2-5
Geranium	GERAN	---	---	---	---	---	---	2-10
Low sagebrush	ARAR8	25-35	25-35	---	---	---	---	---
Antelope bitterbrush	PUTR2	2-5	2-5	2-10	---	---	---	2-5
Mountain big sagebrush	ARVA2	---	---	20-25	---	---	1-5	5-10
Sagebrush	ARTEM	---	---	---	30-40	---	---	---
Snowberry	SYMPH	---	---	---	---	---	---	2-10
Common chokecherry	PRVI	---	---	---	---	---	---	2-5
Serviceberry	AMELA	---	---	---	---	---	---	2-5
Utah serviceberry	AMUT	---	---	---	---	---	---	2-5
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5	---
Utah juniper	JUOS	---	---	---	---	---	1-5	---

Range site number: 028BY037NV 028BY037NV 028BY030NV 028BY034NV None 028BY062NV 025XY004NV

Potential production (lb/acre):

Favorable years	800	800	1,500	400	---	700	2,600
Normal years	600	600	1,200	250	---	500	1,800
Unfavorable years	400	400	900	150	---	300	1,400

1190-Katelana-Boofuss association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Katelana	Boofuss	1	2	3	4
Indian ricegrass	ORHY	2-5	---	2-10	---	2-10	2-5
Bottlebrush squirreltail	SIHY	2-5	---	---	2-5	---	2-5
Basin wildrye	ELCI2	---	2-5	10-20	10-20	10-20	---
Alkali sacaton	SPAI	---	5-10	---	---	---	---
Inland saltgrass	DISPS2	---	2-8	---	2-10	---	---
Thelypody	THELY	---	---	---	1-2	---	---
Shadscale	ATCO	20-50	2-5	---	---	---	20-50
Bud sagebrush	ARSP5	2-10	---	---	---	---	2-10
Black greasewood	SAVE4	20-30	60-75	30-40	50-60	30-40	20-30
Rubber rabbitbrush	CHNA2	---	2-5	2-5	---	2-5	---
Big sagebrush	ARTR2	---	---	20-30	---	20-30	---

Range site number:	028BY074NV	028BY020NV	028BY028NV	028BY069NV	028BY028NV	028BY074NV
Potential production (lb/acre):						
Favorable years	600	500	800	800	800	600
Normal years	400	300	600	600	600	400
Unfavorable years	200	150	400	400	400	200

1201-Biken-Orr association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Biken	Orr	1	2	3	4
Bluegrass	POA++	1-5	5-15	---	---	---	---
Indian ricegrass	ORHY	1-5	---	---	5-10	---	15-25
Bottlebrush squirreltail	SIHY	1-5	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	---	1-5	---	---	---
Thurber needlegrass	STTH2	1-5	---	---	---	---	---
Thickspike wheatgrass	AGDA	---	5-15	---	5-10	---	5-15
Basin wildrye	ELCI2	---	20-40	1-5	10-20	70-80	---
Muttongrass	POFE	---	---	1-5	---	---	---
Canby bluegrass	POCA	---	---	1-5	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	---
Needleandthread	STCO4	---	---	---	---	---	15-25
Black sagebrush	ARARN	1-5	---	---	---	---	---
Big sagebrush	ARTR2	---	10-20	---	---	---	15-25
Rabbitbrush	CHRY59	---	2-5	---	---	---	2-5
Serviceberry	AMELA	---	---	1-5	---	---	---
Mountain big sagebrush	ARVA2	---	---	1-5	---	---	---
Antelope bitterbrush	PUTR2	---	---	1-5	---	---	---
Snowberry	SYMPH	---	---	1-5	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	1-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Basin big sagebrush	ARTRT	---	---	---	---	5-10	---
Fourwing saltbush	ATCA2	---	---	---	---	---	2-8
Winterfat	EULA5	---	---	---	---	---	2-5
Utah juniper	JUOS	1-5	---	---	---	---	---
Singleleaf pinyon	PIMO	1-5	---	1-5	---	---	---

Range site number:	028BY060NV	028BY082NV	028BY058NV	028BY045NV	028BY003NV	028BY005NV
Potential production (lb/acre):						
Favorable years	500	1,400	500	1,000	5,000	800
Normal years	375	1,100	375	800	2,500	600
Unfavorable years	250	900	250	600	1,500	400

1202-Biken-Urmafot association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Biken, eroded	Biken	Urmafot	1	2	3	4
Bluegrass	POA++	1-5	---	---	---	1-5	---	2-8
Indian ricegrass	ORHY	1-5	10-20	5-15	5-10	1-5	15-25	2-5
Bottlebrush squirreltail	SIHY	1-5	2-5	---	---	1-5	2-5	---
Bluebunch wheatgrass	AGSP	1-5	---	15-30	---	---	---	5-10
Thurber needlegrass	STTH2	1-5	---	---	---	---	---	30-40
Sandberg bluegrass	POSE	---	2-5	---	---	---	2-10	---
Needleandthread	STCO4	---	10-20	2-5	---	1-5	5-15	2-8
Muttongrass	POFE	---	---	2-8	---	---	---	---
Basin wildrye	ELCI2	---	---	---	10-20	1-5	---	---
Thickspike wheatgrass	AGDA	---	---	---	5-10	---	---	---
Thickstem cabbage	CACR11	---	---	---	---	1-5	---	---
Tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Arrowleaf balsamroot	BASA3	---	---	---	---	---	---	2-5
Black sagebrush	ARARN	1-5	30-40	25-35	---	1-5	25-35	---
Shadscale	ATCO	---	2-5	2-5	---	---	---	---
Winterfat	EULA5	---	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	1-5	---	2-10
Downy rabbitbrush	CHVIP4	---	---	---	---	---	2-5	---
Big sagebrush	ARTR2	---	---	---	---	---	---	15-25
Utah juniper	JUOS	1-5	---	---	---	1-5	---	---
Singleleaf pinyon	PIMO	1-5	---	---	---	---	---	---

Range site number: 028BY060NV 028BY016NV 028BY006NV 028BY045NV 028BY083NV 028BY011NV 028BY007NV

Potential production (lb/acre):							
Favorable years	500	400	800	1,000	175	600	1,000
Normal years	375	250	600	800	125	400	800
Unfavorable years	250	100	400	600	75	250	600

1221-Cavehill-Grink-Onkeyo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Cavehill	Grink	Onkeyo	1	2	3	4
Basin wildrye	ELCI2	1-5	---	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	10-20	30-40	1-5	---	5-10	15-30
Muttongrass	POFE	1-5	2-8	---	---	---	---	---
Canby bluegrass	POCA	1-5	---	---	---	---	---	---
Indian ricegrass	ORHY	---	2-5	10-20	1-5	---	2-5	---
Needlegrass	STIPA	---	5-10	---	---	---	---	15-30
Bluegrass	POA++	---	---	5-10	1-5	---	5-10	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	2-5	---
Thurber needlegrass	STTH2	---	---	---	1-5	---	1-8	---
Slender wheatgrass	AGTR	---	---	---	---	---	---	5-10
Spike-fescue	LEKI2	---	---	---	---	---	---	5-10
Mountain brome	BRCA5	---	---	---	---	---	---	5-10
Serviceberry	AMELA	1-5	---	---	---	---	---	---
Mountain big sagebrush	ARVA2	1-5	15-25	15-25	---	---	---	15-25
Antelope bitterbrush	PUTR2	1-5	---	5-10	---	---	---	---
Snowberry	SYMPH	1-5	2-8	---	---	---	---	2-8
Curlleaf mountainmahogany	CELE3	1-5	30-50	---	---	---	50-70	---
Black sagebrush	ARARN	---	---	---	1-5	---	---	---
Utah serviceberry	AMUT	---	---	---	---	---	---	1-5
Singleleaf pinyon	PIMO	1-5	---	---	1-5	---	---	---
Utah juniper	JUOS	---	---	---	1-5	---	---	---

Range site number:	028BY058NV	028BY032NV	028BY079NV	028BY060NV	None	028BY042NV	028BY085NV
Potential production (lb/acre):							
Favorable years	500	1,300	700	500	---	3,000	1,500
Normal years	375	900	500	375	---	2,400	1,100
Unfavorable years	250	600	300	250	---	1,700	700

1222-Grink-Amelar-Xine association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Grink	Amelar	Xine	1	2	3	4
Bluebunch wheatgrass	AGSP	20-30	20-30	30-40	1-5	1-5	5-10	---
Indian ricegrass	ORHY	---	2-5	2-5	---	1-5	2-5	---
Bluegrass	POA++	---	5-10	5-10	---	1-5	5-10	---
Basin wildrye	ELCI2	---	---	2-8	1-5	---	---	70-80
Muttongrass	POFE	---	---	---	1-5	---	---	---
Canby bluegrass	POCA	---	---	---	1-5	---	---	---
Bottlebrush squirreltail	SIHY	---	---	---	---	1-5	2-5	---
Thurber needlegrass	STTH2	---	---	---	---	1-5	1-8	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	5-10
Snowberry	SYMPH	2-8	---	2-5	1-5	---	---	---
Mountain big sagebrush	ARVA2	15-25	5-15	15-25	1-5	---	---	---
Antelope bitterbrush	PUTR2	---	5-15	2-10	1-5	---	---	---
Utah serviceberry	AMUT	---	30-40	1-5	---	---	---	---
Serviceberry	AMELA	---	---	---	1-5	---	---	---
Black sagebrush	ARARN	---	---	---	---	1-5	---	---
Basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
Curleaf mountainmahogany	CELE3	15-25	---	---	1-5	---	50-70	---
Singleleaf pinyon	PIMO	---	---	---	1-5	1-5	---	---
Utah juniper	JUOS	---	---	---	---	1-5	---	---

Range site number: 028BY043NV 028BY091NV 028BY088NV 028BY058NV 028BY060NV 028BY042NV 028BY003NV

Potential production (lb/acre):

Favorable years	1,700	1,200	1,100	500	500	3,000	5,000
Normal years	1,300	900	900	375	375	2,400	2,500
Unfavorable years	900	700	700	250	250	1,700	1,500

1230-Garfan-McIvey-Hutchley association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Garfan	McIvey	Hutchley	1	2	3
Bluebunch wheatgrass	AGSP	20-40	30-40	20-40	10-20	20-30	---
Needlegrass	STIPA	15-25	---	---	5-10	---	---
Bottlebrush squirreltail	SIHY	1-5	---	---	---	---	---
Basin wildrye	ELCI2	---	2-10	---	---	---	---
Thurber needlegrass	STTH2	---	10-20	10-15	---	---	---
Bluegrass	POA++	---	2-8	5-10	2-8	2-10	---
Pine needlegrass	STPI2	---	---	2-8	---	---	---
Indian ricegrass	ORHY	---	---	---	2-5	---	---
Sedge	CAREX	---	---	---	---	---	5-15
Meadow barley	HOBR2	---	---	---	---	---	5-10
Mat muhly	MURI	---	---	---	---	---	5-10
Kentucky bluegrass	POPR	---	---	---	---	---	2-5
Nevada bluegrass	PONE3	---	---	---	---	---	50-60
Alpine timothy	PHAL2	---	---	---	---	---	20-30
Goldenweed	HAPLO2	---	---	2-5	---	---	---
Low sagebrush	ARAR8	10-20	---	---	---	25-35	---
Antelope bitterbrush	PUTR2	25-45	2-10	---	30-45	2-5	---
Snowberry	SYMPH	1-5	---	---	---	---	---
Mountain big sagebrush	ARVA2	---	20-25	---	5-15	---	---
sagebrush	ARTEM	---	---	30-40	---	---	---

Range site number:	028BY035NV	028BY030NV	028BY034NV	028BY046NV	028BY037NV	028BY095NV
Potential production (lb/acre):						
Favorable years	1,200	1,500	400	1,200	800	1,600
Normal years	1,000	1,200	250	900	600	1,300
Unfavorable years	800	900	150	700	400	800

1240-Biken association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Biken	Biken, dry	Biken, eroded	1	2	3
Sandberg bluegrass	POSE	2-10	2-5	---	2-10	2-5	---
Indian ricegrass	ORHY	15-25	10-20	1-5	15-25	20-30	15-25
Needleandthread	STCO4	5-15	10-20	1-5	5-15	10-20	15-25
Bottlebrush squirreltail	SIHY	2-5	2-5	1-5	2-5	5-10	---
Basin wildrye	ELCI2	---	---	1-5	---	---	---
Bluegrass	POA++	---	---	1-5	---	---	---
Thickspike wheatgrass	AGDA	---	---	---	---	---	5-15
Thickstem cabbage	CACR11	---	---	1-5	---	---	---
Black sagebrush	ARARN	25-35	30-40	1-5	25-35	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	2-5	---	---
Shadscale	ATCO	---	2-5	---	---	---	---
Antelope bitterbrush	PUTR2	---	---	1-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
Rabbitbrush	CHRSY9	---	---	---	---	2-5	---
Big sagebrush	ARTR2	---	---	---	---	---	15-25
Fourwing saltbush	ATCA2	---	---	---	---	---	2-8
Winterfat	EULA5	---	---	---	---	---	2-5
Rabbitbrush	CHRSY9	---	---	---	---	---	2-5
Utah juniper	JUOS	---	---	1-5	---	---	---

Range site number:	028BY011NV	028BY016NV	028BY083NV	028BY011NV	028BY010NV	028BY005NV
Potential production (lb/acre):						
Favorable years	600	400	175	600	800	800
Normal years	400	250	125	400	600	600
Unfavorable years	250	100	75	250	400	400

1242-Biken-Palinor-Barfan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Biken	Palinor	Barfan	1	2	3
Sandberg bluegrass	POSE	2-10	2-10	2-5	---	---	2-5
Indian ricegrass	ORHY	15-25	15-25	2-10	1-5	15-25	15-25
Needleandthread	STCO4	5-15	5-15	2-10	1-5	10-20	5-15
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	1-5	2-8	1-5
Galleta	HIJA	---	---	2-5	---	2-5	2-8
Basin wildrye	ELCI2	---	---	---	1-5	---	---
Bluegrass	POA++	---	---	---	1-5	---	---
Desert needlegrass	STSP3	---	---	---	---	2-8	2-5
Thickstem cabbage	CACR11	---	---	---	1-5	---	---
Black sagebrush	ARARN	25-35	25-35	---	1-5	---	25-35
Downy rabbitbrush	CHVIP4	2-5	2-5	---	---	---	---
Pigmy sagebrush	ARPY2	---	---	50-70	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	1-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
Fourwing saltbush	ATCA2	---	---	---	---	2-5	---
Nevada ephedra	EPNE	---	---	---	---	2-5	2-5
Winterfat	EULA5	---	---	---	---	---	2-5
Utah juniper	JUOS	---	---	---	1-5	---	---

Range site number:	028BY011NV	028BY011NV	029XY092NV	028BY083NV	029XY006NV	029XY008NV
Potential production (lb/acre):						
Favorable years	600	600	250	175	800	700
Normal years	400	400	175	125	600	500
Unfavorable years	250	250	100	75	300	250

1243-Biken-Breko association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Biken	Breko	1	2	3	4
Sandberg bluegrass	POSE	2-10	---	---	---	2-5	---
Indian ricegrass	ORHY	15-25	15-25	1-5	1-5	15-25	15-25
Needleandthread	STCO4	5-15	10-20	1-5	1-5	5-15	5-10
Bottlebrush squirreltail	SIHY	2-5	2-8	1-5	1-5	1-5	2-5
Galleta	HIJA	---	2-5	1-5	---	2-8	---
Desert needlegrass	STSP3	---	2-8	---	---	2-5	---
Bluegrass	FOA++	---	---	1-5	1-5	---	---
Basin wildrye	ELCI2	---	---	---	1-5	---	---
Milkvetch	ASTRA	---	---	1-5	---	---	---
Lupine	LUPIN	---	---	1-5	---	---	---
Eriogonum	ERIOG	---	---	1-5	---	---	---
Thickstem cabbage	CACR11	---	---	---	1-5	---	---
Scarlet globemallow	SPCO	---	---	---	---	---	2-5
Black sagebrush	ARARN	25-35	---	---	1-5	25-35	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---	25-35
Fourwing saltbush	ATCA2	---	2-5	---	---	---	---
Nevada ephedra	EPNE	---	2-5	---	---	2-5	---
Pigmy sagebrush	ARPY2	---	---	1-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	1-5	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	1-5	---	---
Winterfat	EULA5	---	---	---	---	2-5	---
Spiny hopsage	GRSP	---	---	---	---	---	15-25
Singleleaf pinyon	PIMO	---	---	1-5	---	---	---
Utah juniper	JUOS	---	---	1-5	1-5	---	---

Range site number: 028BY011NV 029XY006NV 028AY021NV 028BY083NV 029XY008NV 028BY052NV

Potential production (lb/acre):

Favorable years	600	800	200	175	700	700
Normal years	400	600	135	125	500	500
Unfavorable years	250	300	75	75	250	400

1245-Biken-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Biken	Biken, eroded	Tulase	1	2	3	4
Sandberg bluegrass	POSE	2-10	---	---	2-5	---	---	---
Indian ricegrass	ORHY	15-25	1-5	5-10	20-30	20-30	30-50	5-10
Needleandthread	STCO4	5-15	1-5	---	10-20	2-8	---	5-10
Bottlebrush squirreltail	SIHY	2-5	1-5	---	5-10	---	2-5	---
Basin wildrye	ELCI2	---	1-5	10-20	---	---	---	---
Bluegrass	POA++	---	1-5	---	---	---	---	2-5
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	---	---
Thurber needleggrass	STTH2	---	---	---	---	15-25	---	20-40
Thickstem cabbage	CACR11	---	1-5	---	---	---	---	---
Crag aster	ASSC3	---	---	---	---	---	---	2-5
Tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Black sagebrush	ARARN	25-35	1-5	---	---	20-35	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
Antelope bitterbrush	PUTR2	---	1-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	25-35	---	---	20-30
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5	---
Bud sagebrush	ARSP5	---	---	---	---	---	2-8	---
Winterfat	EULA5	---	---	---	---	---	20-30	---
Spiny hopsage	GRSP	---	---	---	---	---	---	2-5
Utah juniper	JUOS	---	1-5	---	---	---	---	---

Range site number: 028BY011NV 028BY083NV 028BY045NV 028BY010NV 028BY089NV 028BY084NV 028BY086NV

Potential production (lb/acre):

Favorable years	600	175	1,000	800	450	900	800
Normal years	400	125	800	600	300	700	600
Unfavorable years	250	75	600	400	150	400	350

1251-Alley-Yody-Cowgil association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Alley	Yody	Cowgil	1	2	3	4
Sandberg bluegrass	POSE	2-5	---	2-5	2-5	---	2-5	2-5
Needleandthread	STCO4	10-20	5-10	10-20	10-20	---	10-20	10-20
Indian ricegrass	ORHY	20-30	5-10	20-30	20-30	5-10	20-30	20-30
Bottlebrush squirreltail	SIHY	5-10	---	5-10	2-5	---	5-10	5-10
Thurber needlegrass	STTH2	---	20-40	---	---	---	---	---
Bluegrass	POA++	---	2-5	---	---	---	---	---
Basin wildrye	ELCI2	---	---	---	---	10-20	---	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-10	---	---
Crag aster	ASSC3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	25-35	20-30	25-35	25-35	25-35	25-35	25-35
Rabbitbrush	CHRSY9	2-5	---	2-5	---	---	2-5	2-5
Spiny hopsage	GRSP	---	2-5	---	---	---	---	---

Range site number: 028BY010NV 028BY086NV 028BY010NV 028BY080NV 028BY045NV 028BY010NV 028BY010NV

Potential production (lb/acre):								
Favorable years	800	800	800	600	1,000	800	800	800
Normal years	600	600	600	400	800	600	600	600
Unfavorable years	400	350	400	200	600	400	400	400

1260-Urmafot association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Urmafot, very gravelly	Urmafot, gravelly	1	2	3	4
Bluebunch wheatgrass	AGSP	15-30	1-5	5-10	10-15	20-30	20-40
Muttongrass	POFE	2-8	---	---	---	---	2-5
Indian ricegrass	ORHY	5-15	1-5	2-5	20-30	2-5	5-15
Bluebunch wheatgrass	AGSP	15-30	1-5	5-10	10-15	20-30	20-40
Needleandthread	STCO4	2-5	---	2-8	---	---	2-5
Bluegrass	POA++	---	1-5	2-8	2-8	5-10	---
Bottlebrush squirreltail	SIHY	---	1-5	---	---	---	---
Thurber needlegrass	STTH2	---	1-5	30-40	---	---	---
Tapertip hawksbeard	CRAC2	---	---	2-5	---	---	2-5
Arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---
Goldenweed	HAPLO2	---	---	---	---	---	2-5
Black sagebrush	ARARN	25-35	1-5	---	---	---	25-35
Shadscale	ATCO	2-5	---	---	---	---	2-5
Winterfat	EULA5	2-5	---	---	---	---	2-5
Big sagebrush	ARTR2	---	---	15-25	25-35	---	---
Antelope bitterbrush	PUTR2	---	---	2-10	1-8	5-15	---
Mountain big sagebrush	ARVA2	---	---	---	---	5-15	---
Utah serviceberry	AMUT	---	---	---	---	30-40	---
Utah juniper	JUOS	---	1-5	---	---	---	---
Singleleaf pinyon	PIMO	---	1-5	---	---	---	---

Range site number:	028BY006NV	028BY060NV	028BY007NV	028BY094NV	028BY091NV	028BY008NV
Potential production (lb/acre):						
Favorable years	800	500	1,000	800	1,200	600
Normal years	600	375	800	600	900	400
Unfavorable years	400	250	600	400	700	200

1270-Boofuss-Equis association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Boofuss	Boofuss, dry	Equis	1	2	3
Basin wildrye	ELCI2	10-20	2-5	---	30-60	---	---
Bottlebrush squirreltail	SIHY	2-5	---	---	---	2-5	2-5
Inland saltgrass	DISPS2	2-10	2-8	---	2-5	---	---
Alkali cordgrass	SPGR	---	---	10-15	---	---	---
Alkali sacaton	SPAI	---	5-10	40-50	30-40	---	---
Baltic rush	JUBA	---	---	2-8	---	---	---
Sedge	CAREX	---	---	5-10	---	---	---
Western wheatgrass	AGSM	---	---	---	2-5	---	---
Indian ricegrass	ORHY	---	---	---	---	2-5	2-5
Thelypody	THELY	1-2	---	---	---	---	---
Black greasewood	SAVE4	50-60	60-75	---	5-15	20-30	20-30
Shadscale	ATCO	---	2-5	---	---	20-50	20-50
Rubber rabbitbrush	CHNA2	---	2-5	---	2-5	---	---
Bud sagebrush	ARSP5	---	---	---	---	2-10	2-10

Range site number:	028BY069NV	028BY020NV	028BY002NV	028BY004NV	028BY074NV	028BY074NV
Potential production (lb/acre):						
Favorable years	800	500	1,500	2,200	600	600
Normal years	600	300	1,000	1,500	400	400
Unfavorable years	400	150	700	800	200	200

1280-Palino-Molion-Broland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Palino	Molion	Broland	1	2	3	4
Sandberg bluegrass	POSE	2-10	2-10	---	2-5	---	---	---
Indian ricegrass	ORHY	15-25	15-25	20-30	10-20	5-10	30-50	20-40
Needleandthread	STCO4	5-15	5-15	2-8	10-20	---	---	2-5
Bottlebrush squirreltail	SIHY	2-5	2-5	---	2-5	---	2-5	---
Thurber needlegrass	STTH2	---	---	15-25	---	---	---	---
Basin wildrye	ELCI2	---	---	---	---	10-20	---	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-10	---	---
Dropseed	SPORO	---	---	---	---	---	---	2-5
Galleta	HIJA	---	---	---	---	---	---	2-5
Globeamallow	SPHAE	---	---	---	---	---	---	2-5
Black sagebrush	ARARN	25-35	25-35	20-35	30-40	---	---	---
Downy rabbitbrush	CHVIP4	2-5	2-5	---	---	---	---	---
Shadscale	ATCO	---	---	---	2-5	---	---	15-30
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5	---
Bud sagebrush	ARSP5	---	---	---	---	---	2-8	2-5
Winterfat	EULA5	---	---	---	---	---	20-30	5-10

Range site number:	028BY011NV	028BY011NV	028BY089NV	028BY016NV	028BY045NV	028BY084NV	029XY090NV
Potential production (lb/acre):							
Favorable years	600	600	450	400	1,000	900	700
Normal years	400	400	300	250	800	700	500
Unfavorable years	250	250	150	100	600	400	300

1282-Urmafot-Palinor association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Urmafot, very gravelly	Urmafot, gravelly	Palinor	1	2	3	4
Bluebunch wheatgrass	AGSP	15-30	15-30	---	1-5	10-15	---	1-5
Muttongrass	POFE	2-8	2-8	---	---	---	---	---
Indian ricegrass	ORHY	5-15	5-15	15-25	1-5	20-30	---	1-5
Bluebunch wheatgrass	AGSP	15-30	15-30	---	1-5	10-15	---	1-5
Needleandthread	STCO4	2-5	2-5	5-15	---	---	---	---
Sandberg bluegrass	POSE	---	---	2-10	---	---	---	---
Bottlebrush squirreltail	SIHY	---	---	2-5	1-5	---	---	---
Bluegrass	POA++	---	---	---	1-5	2-8	---	---
Thurber needlegrass	STH2	---	---	---	1-5	---	---	1-5
Basin wildrye	ELCI2	---	---	---	---	---	70-80	1-5
Nevada bluegrass	PONE3	---	---	---	---	---	5-10	---
Canby bluegrass	POCA	---	---	---	---	---	---	1-5
Black sagebrush	ARARN	25-35	25-35	25-35	1-5	---	---	---
Shadscale	ATCO	2-5	2-5	---	---	---	---	---
Winterfat	EULA5	2-5	2-5	---	---	---	---	---
Downy rabbitbrush	CHVIP4	---	---	2-5	---	---	---	---
Big sagebrush	ARTR2	---	---	---	---	25-35	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	1-8	---	---
Basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
Mountain big sagebrush	ARVA2	---	---	---	---	---	---	1-5
Utah juniper	JUOS	---	---	---	1-5	---	---	1-5
Singleleaf pinyon	PIMO	---	---	---	1-5	---	---	1-5

Range site number: 028BY006NV 028BY006NV 028BY011NV 028BY060NV 028BY094NV 028BY003NV 028BY062NV

Potential production (lb/acre):							
Favorable years	800	800	600	500	800	5,000	700
Normal years	600	600	400	375	600	2,500	500
Unfavorable years	400	400	250	250	400	1,500	300

1283-Urmafot-Fax association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Urmafot	Fax	1	2
Bluebunch wheatgrass	AGSP	15-30	5-10	20-40	5-10
Muttongrass	POFE	2-8	---	2-5	---
Indian ricegrass	ORHY	5-15	2-5	5-15	2-5
Bluebunch wheatgrass	AGSP	15-30	5-10	20-40	5-10
Needleandthread	STCO4	2-5	2-8	2-5	2-8
Thurber needlegrass	STTH2	---	30-40	---	30-40
Bluegrass	POA++	---	2-8	---	2-8
Tapertip hawksbeard	CRAC2	---	2-5	2-5	2-5
Arrowleaf balsamroot	BASA3	---	2-5	---	2-5
Goldenweed	HAPLO2	---	---	2-5	---
Black sagebrush	ARARN	25-35	---	25-35	---
Shadscale	ATCO	2-5	---	2-5	---
Winterfat	EULA5	2-5	---	2-5	---
Big sagebrush	ARTR2	---	15-25	---	15-25
Antelope bitterbrush	PUTR2	---	2-10	---	2-10

Range site number: 028BY006NV 028BY007NV 028BY008NV 028BY007NV

Potential production (lb/acre):

Favorable years	800	1,000	600	1,000
Normal years	600	800	400	800
Unfavorable years	400	600	200	600

1287-Palinor-Izar-Biken association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Palinor	Izar	Biken	1	2	3
Sandberg bluegrass	POSE	2-10	2-5	---	---	---	---
Indian ricegrass	ORHY	15-25	10-20	1-5	5-10	10-20	15-25
Needleandthread	STCO4	5-15	10-20	1-5	---	---	---
Bottlebrush squirreltail	SINY	2-5	2-5	1-5	---	5-15	5-10
Basin wildrye	ELCI2	---	---	1-5	10-20	---	---
Bluegrass	POA++	---	---	1-5	---	---	---
Thickspike wheatgrass	AGDA	---	---	---	5-10	---	---
Thickstem cabbage	CACR11	---	---	1-5	---	---	---
Globemallow	SPHAE	---	---	---	---	2-5	2-5
Black sagebrush	ARARN	25-35	30-40	1-5	---	---	---
Downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---
Shadscale	ATCO	---	2-5	---	---	40-50	---
Antelope bitterbrush	PUTR2	---	---	1-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
Bud sagebrush	ARSP5	---	---	---	---	10-15	2-8
Winterfat	EULA5	---	---	---	---	---	40-50
Utah juniper	JUOS	---	---	1-5	---	---	---

Range site number:	028BY011NV	028BY016NV	028BY083NV	028BY045NV	028BY017NV	028BY013NV
Potential production (lb/acre):						
Favorable years	600	400	175	1,000	700	700
Normal years	400	250	125	800	400	500
Unfavorable years	250	100	75	600	250	350

1288-Urmafot-Cavehill-Pookaloo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Urmafot	Cavehill	Pookaloo	1	2
Bluegrass	POA++	1-5	---	1-5	---	---
Indian ricegrass	ORHY	1-5	1-5	1-5	5-15	20-30
Bottlebrush squirreltail	SIHY	1-5	---	1-5	---	5-10
Bluebunch wheatgrass	AGSP	1-5	1-5	1-5	15-30	---
Thurber needlegrass	STTH2	1-5	1-5	1-5	---	---
Canby bluegrass	POCA	---	1-5	---	---	---
Basin wildrye	ELCI2	---	1-5	---	---	---
Muttongrass	POFE	---	---	---	2-8	---
Needleandthread	STCO4	---	---	---	2-5	10-20
Sandberg bluegrass	POSE	---	---	---	---	2-5
Black sagebrush	ARARN	1-5	---	1-5	25-35	---
Mountain big sagebrush	ARVA2	---	1-5	---	---	---
Shadscale	ATCO	---	---	---	2-5	---
Winterfat	EULA5	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35
Rabbitbrush	CHRSY9	---	---	---	---	2-5
Utah juniper	JUOS	1-5	1-5	1-5	---	---
Singleleaf pinyon	PIMO	1-5	1-5	1-5	---	---

Range site number:	028BY060NV	028BY062NV	028BY060NV	028BY006NV	028BY010NV
Potential production (lb/acre):					
Favorable years	500	700	500	800	800
Normal years	375	500	375	600	600
Unfavorable years	250	300	250	400	400

1291-Maderbak-McIvey association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Maderbak	McIvey	1	2	3
Bluegrass	POA++	2-5	2-5	---	2-8	---
Indian ricegrass	ORHY	5-10	---	20-30	---	5-10
Sandberg bluegrass	POSE	2-5	---	---	---	2-5
Galleta	HIJA	2-10	---	---	---	2-5
Thurber needlegrass	STTH2	20-30	15-30	15-25	10-20	---
Canby bluegrass	POCA	2-5	---	---	---	---
Needleandthread	STCO4	5-10	---	2-8	---	15-30
Basin wildrye	ELCI2	---	2-8	---	2-10	---
Crag aster	ASSC3	2-5	2-5	---	---	---
Tapertip hawksbeard	CRAC2	2-5	2-5	---	---	---
Spiny hopsage	GRSP	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	20-30	---	---	---	---
Bluebunch wheatgrass	AGSP	2-5	20-40	---	30-40	---
Mountain big sagebrush	ARVA2	---	15-25	---	20-25	---
Antelope bitterbrush	PUTR2	---	5-10	---	2-10	---
Black sagebrush	ARARN	---	---	20-35	---	35-45
Nevada ephedra	EPNE	---	---	---	---	5-10
Winterfat	EULA5	---	---	---	---	1-5

Range site number: 028AY022NV 028BY087NV 028BY089NV 028BY030NV 029XY014NV

Potential production (lb/acre):

Favorable years	800	900	450	1,500	400
Normal years	600	700	300	1,200	275
Unfavorable years	350	450	150	900	100

1300-Barfan-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Barfan	Tulase	1	2	3
Indian ricegrass	ORHY	2-10	5-10	20-30	15-25	1-5
Bottlebrush squirreltail	SIHY	2-5	---	2-5	2-8	1-5
Needleandthread	STCO4	2-10	---	10-20	10-20	1-5
Sandberg bluegrass	POSE	2-5	---	2-5	---	---
Basin wildrye	ELCI2	---	10-20	---	---	1-5
Thickspike wheatgrass	AGDA	---	5-10	---	---	---
Galleta	HIJA	---	---	---	2-5	---
Desert needlegrass	STSP3	---	---	---	2-8	---
Bluegrass	POA++	---	---	---	---	1-5
Thickstem cabbage	CACR11	---	---	---	---	1-5
Pigmy sagebrush	ARPY2	50-70	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	25-35	25-35	---
Fourwing saltbush	ATCA2	---	---	---	2-5	---
Nevada ephedra	EPNE	---	---	---	2-5	---
Antelope bitterbrush	PUTR2	---	---	---	---	1-5
Black sagebrush	ARARN	---	---	---	---	1-5
Utah juniper	JUOS	---	---	---	---	1-5

Range site number:	028BY040NV	028BY045NV	028BY080NV	029XY006NV	028BY083NV
Potential production (lb/acre):					
Favorable years	250	1,000	600	800	175
Normal years	175	800	400	600	125
Unfavorable years	100	600	200	300	75

1310-Kunzler-Duffer association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Kunzler, warm	Duffer	Kunzler	1	2	3	4
Basin wildrye	ELCI2	10-20	---	10-20	---	30-50	20-40	2-5
Indian ricegrass	ORHY	2-10	---	2-10	2-5	---	---	---
Alkali sacaton	SPAI	---	40-70	---	---	2-5	2-10	---
Inland saltgrass	DISPS2	---	1-15	---	---	---	---	---
Bottlebrush squirreltail	SIHY	---	---	---	2-5	---	---	---
Western wheatgrass	AGSM	---	---	---	---	5-10	---	40-55
Bluegrass	POA++	---	---	---	---	2-5	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	2-5
Other perennial grasses	PPGG	---	2-5	---	---	---	---	---
povertyweed	IVAX	---	2-4	---	---	---	---	---
Torrey quailbush	ATTO	15-25	---	---	---	---	30-50	---
Rubber rabbitbrush	CHNA2	2-5	---	2-5	---	2-5	---	---
Big sagebrush	ARTR2	5-25	---	20-30	---	---	---	---
Black greasewood	SAVE4	5-15	1-5	30-40	20-30	2-5	5-15	---
Iodinebush	ALOC2	---	10-20	---	---	---	---	---
Shadscale	ATCO	---	---	---	20-50	---	---	---
Bud sagebrush	ARSP5	---	---	---	2-10	---	---	---
Basin big sagebrush	ARTRT	---	---	---	---	5-15	2-10	---
Fourwing saltbush	ATCA2	---	---	---	---	---	---	30-40

Range site number: 029XY091NV 029XY094NV 028BY028NV 028BY074NV 028BY041NV 029XY093NV 028BY023NV

Potential production (lb/acre):

Favorable years	1,000	450	800	600	1,800	1,500	800
Normal years	800	300	600	400	1,500	1,200	600
Unfavorable years	600	150	400	200	1,100	800	400

1321-Sycomat sandy loam, 0 to 4 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name	Inclusion number--		
		Sycomat	1	2	3
Indian ricegrass	ORHY	2-5	2-5	---	10-20
Bottlebrush squirreltail	SINY	2-5	2-5	---	5-15
Alkali sacaton	SPAI	---	---	30-40	---
Inland saltgrass	DISPS2	---	---	2-5	---
Western wheatgrass	AGSM	---	---	2-5	---
Basin wildrye	ELCI2	---	---	30-60	---
Other perennial grasses	FPGG	---	---	---	---
Globemallow	SPHAE	---	---	---	2-5
Shadscale	ATCO	20-50	20-50	---	40-50
Bud sagebrush	ARSP5	2-10	2-10	---	10-15
Black greasewood	SAVE4	20-30	20-30	5-15	---

Range site number: 028BY074NV 028BY074NV 028BY004NV 028BY017NV

Potential production (lb/acre):

Favorable years	600	600	2,200	700
Normal years	400	400	1,500	400
Unfavorable years	200	200	800	250

1330-Yody-Dewar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Yody	Dewar	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	2-5
Needleandthread	STCO4	10-20	10-20	2-8	5-10	---	10-20
Indian ricegrass	ORHY	20-30	20-30	20-30	15-25	2-10	20-30
Bottlebrush squirreltail	SIHY	5-10	2-5	---	2-5	---	5-10
Thurber needlegrass	STTH2	---	---	15-25	---	---	---
Basin wildrye	ELCI2	---	---	---	---	10-20	---
Other perennial grasses	PPGG	---	---	---	---	---	---
Scarlet globemallow	SPCO	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	25-35	---	25-35
Rabbitbrush	CHRSY9	2-5	---	---	---	---	2-5
Black sagebrush	ARARN	---	---	20-35	---	---	---
Spiny hopsage	GRSP	---	---	---	15-25	---	---
Big sagebrush	ARTR2	---	---	---	---	20-30	---
Rubber rabbitbrush	CHNA2	---	---	---	---	2-5	---

Range site number:	028BY010NV	028BY080NV	028BY089NV	028BY052NV	028BY028NV	028BY010NV
Potential production (lb/acre):						
Favorable years	800	600	450	700	800	800
Normal years	600	400	300	500	600	600
Unfavorable years	400	200	150	400	400	400

1340-Pyrat-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Pyrat	Tulase	1	2	3	4
Sandberg bluegrass	POSE	2-5	---	2-5	2-10	---	5-10
Needleandthread	STCO4	10-20	---	10-20	5-15	5-10	---
Indian ricegrass	ORHY	20-30	5-10	20-30	15-25	15-25	35-45
Bottlebrush squirreltail	SIHY	5-10	---	2-5	2-5	2-5	2-5
Basin wildrye	ELCI2	---	10-20	---	---	---	---
Thickspike wheatgrass	AGDA	---	5-10	---	---	---	---
Scarlet globemallow	SPCO	---	---	---	---	2-5	---
Globemallow	SPHAE	---	---	---	---	---	1-5
Wyoming big sagebrush	ARTRW	25-35	25-35	25-35	---	25-35	---
Rabbitbrush	CHRSY9	2-5	---	---	---	---	---
Black sagebrush	ARARN	---	---	---	25-35	---	---
Downy rabbitbrush	CHVIP4	---	---	---	2-5	---	---
Spiny hopsage	GRSP	---	---	---	---	15-25	---
Shadscale	ATCO	---	---	---	---	---	20-30
Winterfat	EULA5	---	---	---	---	---	5-10

Range site number:	028BY010NV	028BY045NV	028BY080NV	028BY011NV	028BY052NV	028BY075NV
Potential production (lb/acre):						
Favorable years	800	1,000	600	600	700	700
Normal years	600	800	400	400	500	500
Unfavorable years	400	600	200	250	400	300

1351-Hyzen-Kyler-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Hyzen	Kyler	Rock outcrop	1	2	3
Bluegrass	POA++	1-5	---	---	---	---	---
Indian ricegrass	ORHY	1-5	5-10	---	---	2-5	5-10
Bottlebrush squirreltail	SIHY	1-5	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	---	---	20-30	---	---
Thurber needlegrass	STTH2	1-5	---	---	---	---	---
Needleandthread	STCO4	---	15-30	---	---	5-15	---
Sandberg bluegrass	POSE	---	2-5	---	---	---	---
Galleta	HIJA	---	2-5	---	---	---	---
Needlegrass	STIPA	---	---	---	---	2-5	---
Basin wildrye	ELCI2	---	---	---	---	---	10-20
Thickspike wheatgrass	AGDA	---	---	---	---	---	5-10
Black sagebrush	ARARN	1-5	35-45	---	---	10-20	---
Nevada ephedra	EPNE	---	5-10	---	---	---	---
Winterfat	EULA5	---	1-5	---	---	---	---
Snowberry	SYMPH	---	---	---	2-8	---	---
Mountain big sagebrush	ARVA2	---	---	---	15-25	---	---
Nevada greaseweb	FONE2	---	---	---	---	1-3	---
Littleleaf mountainmahogany	CEIN7	---	---	---	---	40-60	---
Ephedra	EPHED	---	---	---	---	2-8	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35
Utah juniper	JUOS	1-5	---	---	---	---	---
Singleleaf pinyon	PIMO	1-5	---	---	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	---	15-25	---	---

Range site number:	028BY060NV	029XY014NV	None	028BY043NV	029XY040NV	028BY045NV
Potential production (lb/acre):						
Favorable years	500	400	---	1,700	600	1,000
Normal years	375	275	---	1,300	450	800
Unfavorable years	250	100	---	900	300	600

1360-Eganroc-Hyzen-Hardzem association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Eganroc	Hyzen	Hardzem	1	2	3
Muttongrass	POFE	1-5	---	1-5	---	2-8	---
Bluebunch wheatgrass	AGSP	1-5	---	1-5	---	10-20	---
Spike-fescue	LEKI2	1-5	---	1-5	---	---	---
Letterman needlegrass	STLE4	1-5	---	---	---	---	---
Scribner needlegrass	STSC2	---	2-10	---	---	---	---
Indian ricegrass	ORHY	---	2-5	---	---	2-5	---
Needlegrass	STIPA	---	---	---	---	5-10	---
Creeping barberry	BERE	1-5	---	1-5	---	---	---
Goldenweed	HAPLO2	1-5	5-10	1-5	---	---	---
Mountain big sagebrush	ARVA2	1-5	---	1-5	---	15-25	---
Littleleaf mountainmahogany	CEIN7	---	60-70	---	---	---	---
Black sagebrush	ARARN	---	2-8	---	---	---	---
Desert snowberry	SYLO	---	2-8	---	---	---	---
Common juniper	JUCO6	---	---	1-5	---	---	---
Bristlecone pine	PIAR	---	---	1-5	---	---	---
Snowberry	SYMPH	---	---	---	---	2-8	---
Limber pine	PIFL2	1-5	---	1-5	---	---	---
White fir	ABCO	1-5	---	1-5	---	---	---
Utah juniper	JUOS	---	1-3	---	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	---	---	30-50	---

Range site number:	028BY049NV	028BY066NV	028BY063NV	None	028BY032NV	None
Potential production (lb/acre):						
Favorable years	1,200	1,300	400	---	1,300	---
Normal years	1,000	1,000	275	---	900	---
Unfavorable years	800	800	150	---	600	---

1370-Wardbay-Haunchee-Hardol association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Wardbay	Haunchee	Hardol	1	2	3	4
Bluebunch wheatgrass	AGSP	60-80	20-30	15-30	40-60	5-10	---	---
Spike-fescue	LEKI2	1-10	---	5-10	---	---	---	---
Canby bluegrass	POCA	5-15	---	---	---	---	---	---
Slender wheatgrass	AGTR	---	---	5-10	---	---	---	---
Needlegrass	STIPA	---	---	15-30	---	---	---	---
Mountain brome	BRCA5	---	---	5-10	---	---	---	---
Muttongrass	POFE	---	---	---	5-10	---	---	---
Pine needlegrass	STPI2	---	---	---	2-8	---	---	---
Indian ricegrass	ORHY	---	---	---	---	2-5	---	---
Bluegrass	POA++	---	---	---	---	5-10	2-10	---
Thurber needlegrass	STTH2	---	---	---	---	1-8	---	---
Bottlebrush squirreltail	SIHY	---	---	---	---	2-5	---	---
Letterman needlegrass	STLE4	---	---	---	---	---	50-70	---
Goldenweed	HAPLO2	---	---	---	2-8	---	---	---
Lupine	LUPIN	---	---	---	---	---	2-8	---
Penstemon	PENST	---	---	---	---	---	2-5	---
Mountain big sagebrush	ARVA2	10-20	15-25	15-25	---	---	---	---
Snowberry	SYMPH	2-8	2-8	2-8	---	---	---	---
Utah serviceberry	AMUT	---	---	1-5	---	---	---	---
Black sagebrush	ARARN	---	---	---	30-40	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---	---
Curlleaf mountainmahogany	CELE3	---	15-25	---	---	50-70	---	---

Range site number: 028BY070NV 028BY043NV 028BY085NV 028BY048NV 028BY042NV 028BY051NV None

Potential production (lb/acre):

Favorable years	1,100	1,700	1,500	450	3,000	700	---
Normal years	900	1,300	1,100	300	2,400	500	---
Unfavorable years	600	900	700	150	1,700	300	---

1372-Wardbay-Hardol-Adobe association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Wardbay	Hardol	Adobe	1	2	3	4
Bluebunch wheatgrass	AGSP	60-80	15-30	60-80	10-20	40-60	---	---
Spike-fescue	LEKI2	1-10	5-10	---	---	---	---	---
Canby bluegrass	POCA	5-15	---	---	---	---	---	---
Slender wheatgrass	AGTR	---	5-10	---	---	---	---	---
Needlegrass	STIPA	---	15-30	---	5-10	---	---	---
Mountain brome	BRCA5	---	5-10	---	---	---	---	---
Muttongrass	POFE	---	---	2-10	2-8	5-10	---	---
Indian ricegrass	ORHY	---	---	---	2-5	---	---	---
Pine needlegrass	STPI2	---	---	---	---	2-8	---	---
Sedge	CAREX	---	---	---	---	---	5-15	---
Meadow barley	HOBR2	---	---	---	---	---	5-10	---
Mat muhly	MURI	---	---	---	---	---	5-10	---
Kentucky bluegrass	POPR	---	---	---	---	---	2-5	---
Nevada bluegrass	PONE3	---	---	---	---	---	50-60	---
Alpine timothy	PHAL2	---	---	---	---	---	20-30	---
Goldenweed	HAPLO2	---	---	2-5	---	2-8	---	---
Mountain big sagebrush	ARVA2	10-20	15-25	---	15-25	---	---	---
Snowberry	SYMPH	2-8	2-8	---	2-8	---	---	---
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
Black sagebrush	ARARN	---	---	25-35	---	30-40	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---	---
Curlleaf mountainmahogany	CELE3	---	---	---	30-50	---	---	---

Range site number: 028BY070NV 028BY085NV 028BY027NV 028BY032NV 028BY048NV 028BY095NV None

Potential production (lb/acre):

Favorable years	1,100	1,500	600	1,300	450	1,600	---
Normal years	900	1,100	450	900	300	1,300	---
Unfavorable years	600	700	300	600	150	800	---

1374-Wardbay-Adobe-Haunchee association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Wardbay	Adobe	Haunchee	1	2	3
Bluebunch wheatgrass	AGSP	60-80	60-80	20-30	---	15-30	1-5
Spike-fescue	LEK12	1-10	---	---	---	5-10	---
Canby bluegrass	POCA	5-15	---	---	---	---	---
Muttongrass	POFE	---	2-10	---	---	---	---
Mountain brome	BRCA5	---	---	---	1-5	5-10	---
Columbia needlegrass	STNE3	---	---	---	1-5	---	1-5
Slender wheatgrass	AGTR	---	---	---	---	5-10	1-5
Needlegrass	STIPA	---	---	---	---	15-30	---
Mountain brome	BRCA	---	---	---	---	---	1-5
Sedge	CAREX	---	---	---	---	---	1-5
Goldenweed	HAPLO2	---	2-5	---	---	---	---
Fendler meadowrue	THFE	---	---	---	1-5	---	---
Starwort	STELL	---	---	---	1-5	---	---
Horsemint giant hyssop	AGUR	---	---	---	---	---	1-5
Mountain big sagebrush	ARVA2	10-20	---	15-25	---	15-25	1-5
Snowberry	SYMPH	2-8	---	2-8	1-5	2-8	1-5
Black sagebrush	ARARN	---	25-35	---	---	---	---
Mountain gooseberry	RIMO2	---	---	---	1-5	---	---
Western raspberry	RULE	---	---	---	1-5	---	---
Utah serviceberry	AMUT	---	---	---	---	1-5	---
Currant	RIBES	---	---	---	---	---	1-5
Curleaff mountainmahogany	CELE3	---	---	15-25	---	---	---
Quaking aspen	POTRT	---	---	---	1-5	---	1-5
Engelmann spruce	PIEN	---	---	---	1-5	---	---

Range site number:	028BY070NV	028BY027NV	028BY043NV	028BY072NV	028BY085NV	028BY067NV
Potential production (lb/acre):						
Favorable years	1,100	600	1,700	400	1,500	800
Normal years	900	450	1,300	250	1,100	600
Unfavorable years	600	300	900	100	700	400

1380-Cavehill-Hardol-Eganroc association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Cavehill	Hardol	Eganroc	1	2	3	4
Basin wildrye	ELCI2	1-5	---	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	5-10	1-5	---	10-20	1-5	20-30
Muttongrass	POFE	1-5	---	1-5	---	2-8	1-5	---
Canby bluegrass	POCA	1-5	---	---	---	---	---	---
Indian ricegrass	ORHY	---	2-5	---	---	2-5	---	---
Bluegrass	POA++	---	5-10	---	---	---	---	---
Thurber needlegrass	STTH2	---	1-8	---	---	---	---	---
Bottlebrush squirreltail	SIHY	---	2-5	---	---	---	---	---
Spike-fescue	LEKI2	---	---	1-5	---	---	1-5	---
Letterman needlegrass	STLE4	---	---	1-5	---	---	---	---
Needlegrass	STIPA	---	---	---	---	5-10	---	---
Creeping barberry	BERE	---	---	1-5	---	---	1-5	---
Goldenweed	HAPLO2	---	---	1-5	---	---	1-5	---
Serviceberry	AMELA	1-5	---	---	---	---	---	---
Mountain big sagebrush	ARVA2	1-5	---	1-5	---	15-25	1-5	15-25
Antelope bitterbrush	PUTR2	1-5	---	---	---	---	---	---
Snowberry	SYMPH	1-5	---	---	---	2-8	---	2-8
Curleaf mountainmahogany	CELE3	1-5	50-70	---	---	30-50	---	15-25
Common juniper	JUCO6	---	---	---	---	---	1-5	---
Bristlecone pine	PIAR	---	---	---	---	---	1-5	---
Singleleaf pinyon	PIMO	1-5	---	---	---	---	---	---
Limber pine	PIFL2	---	---	1-5	---	---	1-5	---
White fir	ABCO	---	---	1-5	---	---	1-5	---

Range site number:	028BY058NV	028BY042NV	028BY049NV	None	028BY032NV	028BY063NV	028BY043NV
Potential production (lb/acre):							
Favorable years	500	3,000	1,200	---	1,300	400	1,700
Normal years	375	2,400	1,000	---	900	275	1,300
Unfavorable years	250	1,700	800	---	600	150	900

1383-Cavehill-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Cavehill, cobbly	Cavehill, extremely cobbly	Rock outcrop	1	2	3	4
Basin wildrye	ELCI2	1-5	---	---	---	1-5	---	---
Bluebunch wheatgrass	AGSP	1-5	1-5	---	1-5	1-5	10-20	1-5
Muttongrass	POFE	1-5	1-5	---	---	---	2-8	1-5
Canby bluegrass	POCA	1-5	---	---	---	1-5	---	---
Bluegrass	POA++	---	---	---	1-5	---	---	---
Indian ricegrass	ORHY	---	---	---	1-5	1-5	2-5	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	---	---
Thurber needlegrass	STH2	---	---	---	1-5	1-5	---	---
Needlegrass	STIPA	---	---	---	---	---	5-10	---
Spike-fescue	LEKI2	---	---	---	---	---	---	1-5
Goldenweed	HAPLO2	---	---	---	---	---	---	1-5
Creeping barberry	BERE	---	---	---	---	---	---	1-5
Serviceberry	AMELA	1-5	---	---	---	---	---	---
Mountain big sagebrush	ARVA2	1-5	1-5	---	---	1-5	15-25	1-5
Antelope bitterbrush	PUTR2	1-5	---	---	---	---	---	---
Snowberry	SYMPH	1-5	---	---	---	---	2-8	---
Curlleaf mountainmahogany	CELE3	1-5	---	---	---	---	30-50	---
Black sagebrush	ARARN	---	---	---	1-5	---	---	---
Common juniper	JUCO6	---	---	---	---	---	---	1-5
Limber pine	PIFL2	---	---	---	---	---	---	1-5
White fir	ABCO	---	---	---	---	---	---	1-5
Bristlecone pine	PIAR	---	---	---	---	---	---	1-5
Singleleaf pinyon	PIMO	1-5	1-5	---	1-5	1-5	---	---
Utah juniper	JUOS	---	---	---	1-5	1-5	---	---

Range site number:	028BY058NV	028BY076NV	None	028BY060NV	028BY062NV	028BY032NV	028BY063NV
Potential production (lb/acre):							
Favorable years	500	500	---	500	700	1,300	400
Normal years	375	350	---	375	500	900	275
Unfavorable years	250	200	---	250	300	600	150

1384-Cavehill-Haunchee association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Cavehill, cobbly	Haunchee	Cavehill, extremely cobbly	1	2	3
Basin wildrye	ELCI2	1-5	---	---	1-5	10-20	2-8
Bluebunch wheatgrass	AGSP	1-5	10-20	1-5	1-5	---	30-40
Muttongrass	POFE	1-5	2-8	1-5	---	---	---
Canby bluegrass	POCA	1-5	---	---	1-5	---	---
Indian ricegrass	ORHY	---	2-5	---	1-5	5-10	2-5
Needlegrass	STIPA	---	5-10	---	---	---	---
Thurber needlegrass	STTH2	---	---	---	1-5	---	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
Bluegrass	POA++	---	---	---	---	---	5-10
Serviceberry	AMELA	1-5	---	---	---	---	---
Mountain big sagebrush	ARVA2	1-5	15-25	1-5	1-5	---	15-25
Antelope bitterbrush	PUTR2	1-5	---	---	---	---	2-10
Snowberry	SYMPH	1-5	2-8	---	---	---	2-5
Curleaf mountainmahogany	CELE3	1-5	30-50	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
Utah serviceberry	AMUT	---	---	---	---	---	1-5
Singleleaf pinyon	PIMO	1-5	---	1-5	1-5	---	---
Utah juniper	JUOS	---	---	---	1-5	---	---

Range site number:	028BY058NV	028BY032NV	028BY076NV	028BY062NV	028BY045NV	028BY088NV
Potential production (lb/acre):						
Favorable years	500	1,300	500	700	1,000	1,100
Normal years	375	900	350	500	800	900
Unfavorable years	250	600	200	300	600	700

1385-Cavehill-Hyzen-Xine association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Cavehill	Hyzen	Xine	1	2	3
Basin wildrye	ELCI2	1-5	---	2-8	---	---	---
Bluebunch wheatgrass	AGSP	1-5	1-5	30-40	1-5	20-30	---
Muttongrass	POFE	1-5	---	---	1-5	---	---
Canby bluegrass	POCA	1-5	---	---	---	---	---
Bluegrass	POA++	---	1-5	5-10	---	---	---
Indian ricegrass	ORHY	---	1-5	2-5	---	---	---
Bottlebrush squirreltail	SIHY	---	1-5	---	---	---	---
Thurber needlegrass	STTH2	---	1-5	---	---	---	---
Serviceberry	AMELA	1-5	---	---	---	---	---
Mountain big sagebrush	ARVA2	1-5	---	15-25	1-5	15-25	---
Antelope bitterbrush	PUTR2	1-5	---	2-10	---	---	---
Snowberry	SYMPH	1-5	---	2-5	---	2-8	---
Curlleaf mountainmahogany	CELE3	1-5	---	---	---	15-25	---
Black sagebrush	ARARN	---	1-5	---	---	---	---
Utah serviceberry	AMUT	---	---	1-5	---	---	---
Singleleaf pinyon	PIMO	1-5	1-5	---	1-5	---	---
Utah juniper	JUOS	---	1-5	---	---	---	---

Range site number:	028BY058NV	028BY060NV	028BY088NV	028BY076NV	028BY043NV	None
Potential production (lb/acre):						
Favorable years	500	500	1,100	500	1,700	---
Normal years	375	375	900	350	1,300	---
Unfavorable years	250	250	700	200	900	---

1390-Chen-Segura-McIvey association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Chen	Segura	McIvey	1	2	3	4
Bluegrass	POA++	2-10	2-5	2-8	2-8	5-10	---	---
Bluebunch wheatgrass	AGSP	20-30	20-40	30-40	30-40	20-40	1-5	---
Thurber needlegrass	STTH2	---	15-30	10-20	---	10-15	1-5	---
Basin wildrye	ELCI2	---	2-8	2-10	2-8	---	1-5	---
Needlegrass	STIPA	---	---	---	5-15	---	---	---
Pine needlegrass	STPI2	---	---	---	---	2-8	---	---
Canby bluegrass	POCA	---	---	---	---	---	1-5	---
Indian ricegrass	ORHY	---	---	---	---	---	1-5	---
Sedge	CAREX	---	---	---	---	---	---	5-15
Meadow barley	HOB2	---	---	---	---	---	---	5-10
Mat muhly	MURI	---	---	---	---	---	---	5-10
Kentucky bluegrass	POPR	---	---	---	---	---	---	2-5
Nevada bluegrass	PONE3	---	---	---	---	---	---	50-60
Alpine timothy	PHAL2	---	---	---	---	---	---	20-30
Crag aster	ASSC3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	2-5	---	---	---
Arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
Goldenweed	HAPLO2	---	---	---	---	2-5	---	---
Low sagebrush	ARAR8	25-35	---	---	---	---	---	---
Antelope bitterbrush	PUTR2	2-5	5-10	2-10	2-8	---	---	---
Mountain big sagebrush	ARVA2	---	15-25	20-25	15-20	---	1-5	---
Snowberry	SYMPH	---	---	---	5-10	---	---	---
Utah serviceberry	AMUT	---	---	---	5-10	---	---	---
Sagebrush	ARTEM	---	---	---	---	30-40	---	---
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5	---
Utah juniper	JUOS	---	---	---	---	---	1-5	---

Range site number: 028BY037NV 028BY087NV 028BY030NV 028BY015NV 028BY034NV 028BY062NV 028BY095NV

Potential production (lb/acre):							
Favorable years	800	900	1,500	1,500	400	700	1,600
Normal years	600	700	1,200	1,100	250	500	1,300
Unfavorable years	400	450	900	700	150	300	800

1391-Chen-Tusel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Chen	Tusel	1	2	3	4
Bluegrass	POA++	2-10	---	2-5	---	---	---
Bluebunch wheatgrass	AGSP	20-30	---	20-40	1-5	---	---
Columbia needlegrass	STNE3	---	2-8	---	1-5	---	---
Slender wheatgrass	AGTR	---	2-8	---	1-5	---	---
Mountain brome	BRCA5	---	15-20	---	---	---	---
Letterman needlegrass	STLE4	---	15-20	---	---	---	---
Spike-fescue	LEKI2	---	5-10	---	---	---	---
Sedge	CAREX	---	2-5	---	1-5	---	5-15
Thurber needlegrass	STTH2	---	---	15-30	---	---	---
Basin wildrye	ELCI2	---	---	2-8	---	---	---
Mountain brome	BRCA	---	---	---	1-5	---	---
Meadow barley	HOBR2	---	---	---	---	---	5-10
Mat muhly	MURI	---	---	---	---	---	5-10
Kentucky bluegrass	POPR	---	---	---	---	---	2-5
Nevada bluegrass	PONE3	---	---	---	---	---	50-60
Alpine timothy	PHAL2	---	---	---	---	---	20-30
Crag aster	ASSC3	---	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---
Horsemint giant hyssop	AGUR	---	---	---	1-5	---	---
Low sagebrush	ARAR8	25-35	---	---	---	---	---
Antelope bitterbrush	PUTR2	2-5	---	5-10	---	---	---
Snowberry	SYMPH	---	2-5	---	1-5	---	---
Mountain big sagebrush	ARVA2	---	15-25	15-25	1-5	---	---
Currant	RIBES	---	---	---	1-5	---	---
Quaking aspen	POTRT	---	---	---	1-5	---	---

Range site number:	028BY037NV	028BY029NV	028BY087NV	028BY067NV	None	028BY095NV
Potential production (lb/acre):						
Favorable years	800	1,700	900	800	---	1,600
Normal years	600	1,200	700	600	---	1,300
Unfavorable years	400	900	450	400	---	800

1392-Chen-McIvey-Birchcreek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Chen	McIvey	Birchcreek	1	2
Bluegrass	POA++	2-10	2-8	2-8	---	2-5
Bluebunch wheatgrass	AGSP	20-30	30-40	10-20	10-20	20-40
Basin wildrye	ELCI2	---	2-10	---	---	2-8
Thurber needlegrass	STTH2	---	10-20	---	---	15-30
Indian ricegrass	ORHY	---	---	2-5	2-5	---
Needlegrass	STIPA	---	---	5-10	5-10	---
Muttongrass	POFE	---	---	---	2-8	---
Crag aster	ASSC3	---	---	---	---	2-5
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5
Low sagebrush	ARAR8	25-35	---	---	---	---
Antelope bitterbrush	PUTR2	2-5	2-10	30-45	---	5-10
Mountain big sagebrush	ARVA2	---	20-25	5-15	15-25	15-25
Snowberry	SYMPH	---	---	---	2-8	---
Curleaf mountainmahogany	CELE3	---	---	---	30-50	---

Range site number:	028BY037NV	028BY030NV	028BY046NV	028BY032NV	028BY087NV
Potential production (lb/acre):					
Favorable years	800	1,500	1,200	1,300	900
Normal years	600	1,200	900	900	700
Unfavorable years	400	900	700	600	450

1400-Suak-Segura-McIvey association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Suak	Segura	McIvey	1	2	3	4
Bluebunch wheatgrass	AGSP	10-20	20-40	30-40	10-20	---	1-5	20-30
Indian ricegrass	ORHY	2-5	---	---	2-5	---	---	---
Needlegrass	STIPA	5-10	---	5-15	5-10	---	---	---
Muttongrass	POFE	2-8	---	---	---	---	1-5	---
Thurber needlegrass	STTH2	---	15-30	---	---	---	---	---
Basin wildrye	ELCI2	---	2-8	2-8	---	---	---	---
Bluegrass	POA++	---	2-5	2-8	2-8	---	---	2-10
Crag aster	ASSC3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	2-5	---	---	---	---
Arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
Mountain big sagebrush	ARVA2	15-25	15-25	15-20	5-15	---	1-5	---
Snowberry	SYMPH	2-8	---	5-10	---	---	---	---
Antelope bitterbrush	PUTR2	---	5-10	2-8	30-45	---	---	2-5
Utah serviceberry	AMUT	---	---	5-10	---	---	---	---
Low sagebrush	ARAR8	---	---	---	---	---	---	25-35
Curlleaf mountainmahogany	CELE3	30-50	---	---	---	---	---	---
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5	---

Range site number:	028BY032NV	028BY087NV	028BY015NV	028BY046NV	None	028BY076NV	028BY037NV
Potential production (lb/acre):							
Favorable years	1,300	900	1,500	1,200	---	500	800
Normal years	900	700	1,100	900	---	350	600
Unfavorable years	600	450	700	700	---	200	400

1430-Hardzem-Haunchee-Wardbay association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Hardzem	Haunchee	Wardbay	1	2	3
Canby bluegrass	POCA	---	---	5-15	---	---	---
Idaho fescue	FEID	---	---	---	---	X	---
Indian ricegrass	ORHY	---	2-5	---	2-5	---	---
Letterman needlegrass	STLE4	X	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	X	---
Thurber needlegrass	STTH2	---	---	---	5-10	---	---
Big squirreltail	SIJU	---	---	---	---	X	---
Bluebunch wheatgrass	AGSP	X	10-20	60-80	5-10	X	---
Bluegrass	POA++	---	---	---	2-8	---	---
Bottlebrush squirreltail	SIHY	---	---	---	2-5	---	---
Mountain brome	BRCA5	---	---	---	---	X	---
Muttongrass	POFE	X	2-8	---	---	---	---
Needleandthread	STCO4	---	---	---	---	---	---
Needlegrass	STIPA	---	5-10	---	---	---	---
Sedge	CAREX	X	---	---	---	---	---
Slender wheatgrass	AGTR	---	---	---	---	X	---
Spike-fescue	LEKI2	X	---	1-10	---	---	---
Creeping barberry	BERE	X	---	---	---	---	---
Goldenweed	HAPLO2	X	---	---	---	---	---
Groundsel	SENEC	---	---	---	---	X	---
Meadowrue	THALI2	---	---	---	---	X	---
Melic	MELIC	---	---	---	---	X	---
Common juniper	JUCO6	X	---	---	---	---	---
Mountain big sagebrush	ARVA2	X	15-25	10-20	2-5	X	---
Serviceberry	AMELA	X	---	---	---	---	---
Snowberry	SYMPH	---	2-8	2-8	---	X	---
Bristlecone pine	PIAR	X	---	---	---	---	---
Curleaf mountainmahogany	CELE3	---	30-50	---	50-70	---	---
Limber pine	PIFL2	X	---	---	---	---	---
Quaking aspen	POTRT	---	---	---	---	X	---
White fir	ABCO	X	---	---	---	---	---

Range site number:	028BY063NV	028BY032NV	028BY070NV	028BY042NV	028BY067NV	None
Potential production (lb/acre):						
Favorable years	800	1,300	1,100	3,000	800	---
Normal years	500	900	900	2,400	600	---
Unfavorable years	300	600	600	1,700	400	---

1431-Hardzem-Hackwood-Guiser association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Hardzem	Hackwood	Guiser	1	2	3	4
Spike-fescue	LEKI2	1-5	---	1-5	---	---	---	5-10
Muttongrass	POFE	1-5	---	---	---	10-15	2-8	---
Bluebunch wheatgrass	AGSP	1-5	1-5	1-5	---	40-60	10-20	---
Mountain brome	BRCA	---	1-5	---	---	---	---	---
Slender wheatgrass	AGTR	---	1-5	1-5	---	---	---	2-8
Sedge	CAREX	---	1-5	1-5	---	---	---	2-5
Columbia needlegrass	STNE3	---	1-5	---	---	---	---	2-8
Letterman needlegrass	STLE4	---	---	1-5	---	---	---	15-20
Nevada bluegrass	PONE3	---	---	1-5	---	---	---	---
Mountain brome	BRCA5	---	---	1-5	---	---	---	15-20
Pine needlegrass	STPI2	---	---	---	---	2-8	---	---
Indian ricegrass	ORHY	---	---	---	---	---	2-5	---
Needlegrass	STIPA	---	---	---	---	---	5-10	---
Goldenweed	HAPLO2	1-5	---	---	---	---	---	---
Creeping barberry	BERE	1-5	---	1-5	---	---	---	---
Horsemint giant hyssop	AGUR	---	1-5	---	---	---	---	---
Mountain big sagebrush	ARVA2	1-5	1-5	---	---	---	15-25	15-25
Common juniper	JUCO6	1-5	---	1-5	---	---	---	---
Limber pine	PIFL2	1-5	---	---	---	---	---	---
White fir	ABCO	1-5	---	1-5	---	---	---	---
Bristlecone pine	PIAR	1-5	---	---	---	---	---	---
Currant	RIBES	---	1-5	---	---	---	---	---
Snowberry	SYMPH	---	1-5	1-5	---	---	2-8	2-5
Serviceberry	AMELA	---	---	1-5	---	---	---	---
Sagebrush	ARTEM	---	---	---	---	30-40	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---	---
Quaking aspen	POTRT	---	1-5	1-5	---	---	---	---
Curleaf mountainmahogany	CELE3	---	---	---	---	---	30-50	---
Range site number:								
		028BY063NV	028BY067NV	028BY055NV	None	028BY038NV	028BY032NV	028BY029NV
Potential production (lb/acre):								
Favorable years		400	800	600	---	450	1,300	1,700
Normal years		275	600	425	---	300	900	1,200
Unfavorable years		150	400	250	---	150	600	900

1451-Birchcreek-Segura-Chen association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Birchcreek	Segura	Chen	1	2	3	4
Bluebunch wheatgrass	AGSP	10-20	20-40	20-30	30-40	1-5	30-40	---
Indian ricegrass	ORHY	2-5	---	---	---	1-5	---	---
Needlegrass	STIPA	5-10	---	---	5-15	---	---	---
Bluegrass	POA++	2-8	2-5	2-10	2-8	---	2-8	---
Thurber needlegrass	STTH2	---	15-30	---	---	1-5	10-20	---
Basin wildrye	ELCI2	---	2-8	---	2-8	1-5	2-10	---
Canby bluegrass	POCA	---	---	---	---	1-5	---	---
Crag aster	ASSC3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	2-5	---	---	---
Arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
Mountain big sagebrush	ARVA2	5-15	15-25	---	15-20	1-5	20-25	---
Antelope bitterbrush	PUTR2	30-45	5-10	2-5	2-8	---	2-10	---
Low sagebrush	ARAR8	---	---	25-35	---	---	---	---
Snowberry	SYMPH	---	---	---	5-10	---	---	---
Utah serviceberry	AMUT	---	---	---	5-10	---	---	---
Singleleaf pinyon	PIMO	---	---	---	---	1-5	---	---
Utah juniper	JUOS	---	---	---	---	1-5	---	---

Range site number: 028BY046NV 028BY087NV 028BY037NV 028BY015NV 028BY062NV 028BY030NV None

Potential production (lb/acre):

Favorable years	1,200	900	800	1,500	700	1,500	---
Normal years	900	700	600	1,100	500	1,200	---
Unfavorable years	700	450	400	700	300	900	---

1460-Unsel gravelly fine sandy loam, 2 to 8 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name	Inclusion number--			
		Unsel	1	2	3	4
Bottlebrush squirreltail	SIHY	2-8	5-15	5-10	2-5	2-8
Galleta	HIJA	5-10	---	---	---	5-10
Indian ricegrass	ORHY	15-25	10-20	20-30	2-5	15-25
Sandberg bluegrass	POSE	---	---	2-5	---	---
Needleandthread	STCO4	---	---	10-20	---	---
Globemallow	SPHAE	---	2-5	---	---	---
Bailey greasewood	SAVEB	0-10	---	---	---	0-10
Shadscale	ATCO	40-50	40-50	---	20-50	40-50
Winterfat	EULA5	5-10	---	---	---	5-10
Bud sagebrush	ARSP5	5-15	10-15	---	2-10	5-15
Nevada Ephedra	EPNE	1-5	---	---	---	1-5
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---
Rabbitbrush	CHRSY9	---	---	2-5	---	---
Black greasewood	SAVE4	---	---	---	20-30	---

Range site number:	029XY017NV	028BY017NV	028BY010NV	028BY074NV	029XY017NV
Potential production (lb/acre):					
Favorable years	500	700	800	600	500
Normal years	350	400	600	400	350
Unfavorable years	200	250	400	200	200

1480-Amelar-Bobs association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Amelar	Bobs	1	2	3	4
Basin wildrye	ELCI2	2-8	---	70-80	---	---	---
Bluebunch wheatgrass	AGSP	30-40	10-15	---	15-30	---	---
Bluegrass	POA++	5-10	2-8	---	---	2-5	25-40
Indian ricegrass	ORHY	2-5	20-30	---	5-15	5-10	---
Nevada bluegrass	PONE3	---	---	5-10	---	---	---
Muttongrass	POFE	---	---	---	2-8	---	---
Needleandthread	STCO4	---	---	---	2-5	5-10	---
Thurber needlegrass	STTH2	---	---	---	---	20-40	---
Sedge	CAREX	---	---	---	---	---	20-30
Baltic rush	JUBA	---	---	---	---	---	10-15
Crag aster	ASSC3	---	---	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---
Cinquefoil	POTEN	---	---	---	---	---	2-5
Groundsel	SENEC	---	---	---	---	---	2-5
Mountain big sagebrush	ARVA2	15-25	---	---	---	---	---
Antelope bitterbrush	PUTR2	2-10	1-8	---	---	---	---
Snowberry	SYMPH	2-5	---	---	---	---	---
Utah serviceberry	AMUT	1-5	---	---	---	---	---
Big sagebrush	ARTR2	---	25-35	---	---	---	---
Basin big sagebrush	ARTRT	---	---	5-10	---	---	---
Black sagebrush	ARARN	---	---	---	25-35	---	---
Shadscale	ATCO	---	---	---	2-5	---	---
Winterfat	EULA5	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	20-30	---
Spiny hopsage	GRSP	---	---	---	---	2-5	---

Range site number:	028BY088NV	028BY094NV	028BY003NV	028BY006NV	028BY086NV	028BY001NV
Potential production (lb/acre):						
Favorable years	1,100	800	5,000	800	800	4,000
Normal years	900	600	2,500	600	600	2,000
Unfavorable years	700	400	1,500	400	350	1,200

1491-Pyrat-Palino-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pyrat	Palino	Tulase	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-10	---	---	---	---	---
Needleandthread	STCO4	10-20	5-15	---	1-5	---	2-5	2-8
Indian ricegrass	ORHY	20-30	15-25	5-10	1-5	1-5	5-15	2-5
Bottlebrush squirreltail	SIHY	5-10	2-5	---	1-5	1-5	---	---
Basin wildrye	ELCI2	---	---	10-20	1-5	---	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	---	---
Bluegrass	POA++	---	---	---	1-5	1-5	---	2-8
Bluebunch wheatgrass	AGSP	---	---	---	---	1-5	15-30	5-10
Thurber needlegrass	STTH2	---	---	---	---	1-5	---	30-40
Muttongrass	POFE	---	---	---	---	---	2-8	---
Thickstem cabbage	CACR11	---	---	---	1-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Arrowleaf balsamroot	BASA3	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---	---	---
Rabbitbrush	CHRSY9	2-5	---	---	---	---	---	---
Black sagebrush	ARARN	---	25-35	---	1-5	1-5	25-35	---
Downy rabbitbrush	CHVIP4	---	2-5	---	---	---	---	---
Antelope bitterbrush	PUTR2	---	---	---	1-5	---	---	2-10
Shadscale	ATCO	---	---	---	---	---	2-5	---
Winterfat	EULA5	---	---	---	---	---	2-5	---
Big sagebrush	ARTR2	---	---	---	---	---	---	15-25
Utah juniper	JUOS	---	---	---	1-5	1-5	---	---
Singleleaf pinyon	PIMO	---	---	---	---	1-5	---	---

Range site number: 028BY010NV 028BY011NV 028BY045NV 028BY083NV 028BY060NV 028BY006NV 028BY007NV

Potential production (lb/acre):

Favorable years	800	600	1,000	175	500	800	1,000
Normal years	600	400	800	125	375	600	800
Unfavorable years	400	250	600	75	250	400	600

1492-Pyrat-Shabliss-Linoyer association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pyrat	Shabliss	Linoyer	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-5	---	---
Needleandthread	STCO4	10-20	10-20	---	---	10-20	---	---
Indian ricegrass	ORHY	20-30	20-30	15-25	5-10	20-30	---	30-50
Bottlebrush squirreltail	SIHY	5-10	2-5	5-10	---	5-10	---	2-5
Basin wildrye	ELCI2	---	---	---	10-20	---	2-5	---
Thicksipke wheatgrass	AGDA	---	---	---	5-10	---	---	---
Bluebunch wheatgrass	AGSP	---	---	---	---	---	5-10	---
Bluegrass	POA++	---	---	---	---	---	2-10	---
Mountain brome	BRCA5	---	---	---	---	---	2-5	---
Idaho fescue	FEID	---	---	---	---	---	30-60	---
Globemallow	SPHAE	---	---	2-5	---	---	---	---
Arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
Tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	25-35	25-35	---	---
Rabbitbrush	CHRSY9	2-5	---	---	---	2-5	---	---
Winterfat	EULA5	---	---	40-50	---	---	---	20-30
Bud sagebrush	ARSP5	---	---	2-8	---	---	---	2-8
Mountain big sagebrush	ARVA2	---	---	---	---	---	2-5	---
Utah serviceberry	AMUT	---	---	---	---	---	2-5	---
Snowberry	SYMPH	---	---	---	---	---	2-5	---
Antelope bitterbrush	PUTR2	---	---	---	---	---	2-5	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	2-5

Range site number: 028BY010NV 028BY080NV 028BY013NV 028BY045NV 028BY010NV 025XY010NV 028BY084NV

Potential production (lb/acre):

Favorable years	800	600	700	1,000	800	1,400	900
Normal years	600	400	500	800	600	1,000	700
Unfavorable years	400	200	350	600	400	700	400

1493-Pyrat-Parisa-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pyrat	Parisa	Tulase	1	2	3	4
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-5	2-10	2-5
Needleandthread	STCO4	10-20	10-20	---	---	10-20	5-15	10-20
Indian ricegrass	ORHY	20-30	20-30	5-10	15-25	20-30	15-25	20-30
Bottlebrush squirreltail	SIHY	5-10	5-10	---	5-10	5-10	2-5	2-5
Basin wildrye	ELCI2	---	---	10-20	---	---	---	---
Thickspike wheatgrass	AGDA	---	---	5-10	---	---	---	---
Globemallow	SPHAE	---	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	25-35	---	25-35	---	25-35
Rabbitbrush	CHRSY9	2-5	2-5	---	---	2-5	---	---
Winterfat	EULA5	---	---	---	40-50	---	---	---
Bud sagebrush	ARSP5	---	---	---	2-8	---	---	---
Black sagebrush	ARARN	---	---	---	---	---	25-35	---
Downy rabbitbrush	CHVIP4	---	---	---	---	---	2-5	---

Range site number: 028BY010NV 028BY010NV 028BY045NV 028BY013NV 028BY010NV 028BY011NV 028BY080NV

Potential production (lb/acre):

Favorable years	800	800	1,000	700	800	600	600
Normal years	600	600	800	500	600	400	400
Unfavorable years	400	400	600	350	400	250	200

1494-Pyrat-McConnel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Pyrat	McConnel	1	2
Sandberg bluegrass	POSE	2-5	2-5	---	---
Needleandthread	STCO4	10-20	10-20	---	---
Indian ricegrass	ORHY	20-30	20-30	2-10	15-25
Bottlebrush squirreltail	SIHY	5-10	5-10	---	2-5
Basin wildrye	ELCI2	---	---	10-20	---
Bluegrass	POA++	---	---	---	2-5
Wheatgrass	AGROP2	---	---	---	5-10
Wyoming big sagebrush	ARTRW	25-35	25-35	---	30-35
Rabbitbrush	CHRSY9	2-5	2-5	---	---
Big sagebrush	ARTR2	---	---	20-30	---
Rubber rabbitbrush	CHNA2	---	---	2-5	---
Black greasewood	SAVE4	---	---	30-40	---
Winterfat	EULA5	---	---	---	15-30
Douglas rabbitbrush	CHVI8	---	---	---	2-5

Range site number:	028BY010NV	028BY010NV	028BY028NV	028BY054NV
Potential production (lb/acre):				
Favorable years	800	800	800	600
Normal years	600	600	600	450
Unfavorable years	400	400	400	200

1510-Raph-Zimwala-Heist association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Raph	Zimwala	Heist	1	2	3	4
Bottlebrush squirreltail	SIHY	10-20	2-5	2-5	---	2-5	5-10	5-10
Indian ricegrass	ORHY	20-30	2-8	30-50	5-10	15-25	20-30	15-25
Western wheatgrass	AGSM	---	5-15	---	---	---	---	---
Basin wildrye	ELCI2	---	---	---	10-20	---	---	---
Thickspike wheatgrass	AGDA	---	---	---	5-10	---	---	---
Bluegrass	POA++	---	---	---	---	2-5	---	---
Wheatgrass	AGROP2	---	---	---	---	5-10	---	---
Sandberg bluegrass	POSE	---	---	---	---	---	2-5	---
Needleandthread	STCO4	---	---	---	---	---	10-20	---
Globemallow	SPHAE	2-5	---	---	---	---	---	2-5
Shadscale	ATCO	50-60	---	---	---	---	---	---
Sickle saltbush	ATFA	---	55-65	---	---	---	---	---
Winterfat	EULA5	---	5-15	20-30	---	15-30	---	40-50
Douglas rabbitbrush	CHVI8	---	---	2-5	---	2-5	---	---
Bud sagebrush	ARSP5	---	---	2-8	---	---	---	2-8
Wyoming big sagebrush	ARTRW	---	---	---	25-35	30-35	25-35	---
Rabbitbrush	CHRSY9	---	---	---	---	---	2-5	---

Range site number: 028BY009NV 028BY047NV 028BY084NV 028BY045NV 028BY054NV 028BY010NV 028BY013NV

Potential production (lb/acre):

Favorable years	500	500	900	1,000	600	800	700
Normal years	400	350	700	800	450	600	500
Unfavorable years	300	200	400	600	200	400	350

1511-Hessing-Uwell-Zimwala association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Hessing	Uwell	Zimwala	1	2	3
Indian ricegrass	ORHY	35-45	15-25	2-8	30-50	5-10	15-25
Bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5	---	5-10
Sandberg bluegrass	POSE	5-10	---	---	---	---	---
Bluegrass	POA++	---	2-5	---	---	---	---
Wheatgrass	AGROP2	---	5-10	---	---	---	---
Western wheatgrass	AGSM	---	---	5-15	---	---	---
Basin wildrye	ELCI2	---	---	---	---	10-20	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
Globemallow	SPHAE	1-5	---	---	---	---	2-5
Shadscale	ATCO	20-30	---	---	---	---	---
Winterfat	EULA5	5-10	15-30	5-15	20-30	---	40-50
Douglas rabbitbrush	CHVI8	---	2-5	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	30-35	---	---	25-35	---
Sickle saltbush	ATFA	---	---	55-65	---	---	---
Bud sagebrush	ARSP5	---	---	---	2-8	---	2-8

Range site number:	028BY075NV	028BY054NV	028BY047NV	028BY084NV	028BY045NV	028BY013NV
Potential production (lb/acre):						
Favorable years	700	600	500	900	1,000	700
Normal years	500	450	350	700	800	500
Unfavorable years	300	200	200	400	600	350

1520-Fax-Yody-Broland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Fax	Yody	Broland	1	2	3	4
Indian ricegrass	ORHY	5-10	5-10	20-30	1-5	---	1-5	5-10
Thurber needlegrass	STTH2	20-40	20-40	15-25	1-5	---	---	---
Needleandthread	STCO4	5-10	5-10	2-8	---	---	1-5	---
Bluegrass	POA++	2-5	2-5	---	1-5	---	1-5	---
Bottlebrush squirreltail	SIHY	---	---	---	1-5	---	1-5	---
Bluebunch wheatgrass	AGSP	---	---	---	1-5	---	---	---
Basin wildrye	ELCI2	---	---	---	---	70-80	1-5	10-20
Nevada bluegrass	PONE3	---	---	---	---	5-10	---	---
Thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
Crag aster	ASSC3	2-5	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	2-5	2-5	---	---	---	---	---
Thickstem cabbage	CACR11	---	---	---	---	---	1-5	---
Wyoming big sagebrush	ARTRW	20-30	20-30	---	---	---	---	25-35
Spiny hopsage	GRSP	2-5	2-5	---	---	---	---	---
Black sagebrush	ARARN	---	---	20-35	1-5	---	1-5	---
Basin big sagebrush	ARTRT	---	---	---	---	5-10	---	---
Antelope bitterbrush	PUTR2	---	---	---	---	---	1-5	---
Utah juniper	JUOS	---	---	---	1-5	---	1-5	---
Singleleaf pinyon	PIMO	---	---	---	1-5	---	---	---

Range site number: 028BY086NV 028BY086NV 028BY089NV 028BY060NV 028BY003NV 028BY083NV 028BY045NV

Potential production (lb/acre):

Favorable years	800	800	450	500	5,000	175	1,000
Normal years	600	600	300	375	2,500	125	800
Unfavorable years	350	350	150	250	1,500	75	600

1550-Haunchee-Muiral-Wardbay association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Haunchee	Muiral	Wardbay	1	2	3	4
Bluebunch wheatgrass	AGSP	20-30	---	60-80	60-80	1-5	40-60	---
Mountain brome	BRCA5	---	1-5	---	---	---	---	---
Columbia needlegrass	STNE3	---	1-5	---	---	---	---	---
Spike-fescue	LEKI2	---	---	1-10	---	1-5	---	---
Canby bluegrass	POCA	---	---	5-15	---	---	---	---
Muttongrass	POFE	---	---	---	2-10	1-5	5-10	---
Pine needlegrass	STPI2	---	---	---	---	---	2-8	---
Fendler meadowrue	THFE	---	1-5	---	---	---	---	---
Starwort	STELL	---	1-5	---	---	---	---	---
Goldenweed	HAPLO2	---	---	---	2-5	1-5	2-8	---
Creeping barberry	BERE	---	---	---	---	1-5	---	---
Snowberry	SYMPH	2-8	1-5	2-8	---	---	---	---
Mountain big sagebrush	ARVA2	15-25	---	10-20	---	1-5	---	---
Mountain gooseberry	RIMO2	---	1-5	---	---	---	---	---
Western raspberry	RULE	---	1-5	---	---	---	---	---
Black sagebrush	ARARN	---	---	---	25-35	---	30-40	---
Common juniper	JUCO6	---	---	---	---	1-5	---	---
Limber pine	PIFL2	---	---	---	---	1-5	---	---
White fir	ABCO	---	---	---	---	1-5	---	---
Bristlecone pine	PIAR	---	---	---	---	1-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5	---
Curlleaf mountainmahogany	CELE3	15-25	---	---	---	---	---	---
Quaking aspen	POTRT	---	1-5	---	---	---	---	---
Engelmann spruce	PIEN	---	1-5	---	---	---	---	---

Range site number:	028BY043NV	028BY072NV	028BY070NV	028BY027NV	028BY063NV	028BY048NV	None
Potential production (lb/acre):							
Favorable years	1,700	400	1,100	600	400	450	---
Normal years	1,300	250	900	450	275	300	---
Unfavorable years	900	100	600	300	150	150	---

1560-Adobe-Haunchee-Hardzem association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Adobe	Haunchee	Hardzem	1	2	3	4
Bluebunch wheatgrass	AGSP	60-80	20-30	1-5	60-80	1-5	---	40-60
Muttongrass	POFE	2-10	---	1-5	---	---	---	5-10
Spike-fescue	LEKI2	---	---	1-5	1-10	---	---	---
Canby bluegrass	POCA	---	---	---	5-15	---	---	---
Bluegrass	POA++	---	---	---	---	1-5	---	---
Indian ricegrass	ORHY	---	---	---	---	1-5	---	---
Bottlebrush squirreltail	SIHY	---	---	---	---	1-5	---	---
Thurber needlegrass	STH2	---	---	---	---	1-5	---	---
Mountain brome	BRCA5	---	---	---	---	---	1-5	---
Columbia needlegrass	STNE3	---	---	---	---	---	1-5	---
Pine needlegrass	STPI2	---	---	---	---	---	---	2-8
Goldenweed	HAPLO2	2-5	---	1-5	---	---	---	2-8
Creeping barberry	BERE	---	---	1-5	---	---	---	---
Fendler meadowrue	THFE	---	---	---	---	---	1-5	---
Starwort	STELL	---	---	---	---	---	1-5	---
Black sagebrush	ARARN	25-35	---	---	---	1-5	---	30-40
Mountain big sagebrush	ARVA2	---	15-25	1-5	10-20	---	---	---
Common juniper	JUCO6	---	---	1-5	---	---	---	---
Limber pine	PIFL2	---	---	1-5	---	---	---	---
White fir	ABCO	---	---	1-5	---	---	---	---
Bristlecone pine	PIAR	---	---	1-5	---	---	---	---
Snowberry	SYMPH	---	2-8	---	2-8	---	1-5	---
Mountain gooseberry	RIMO2	---	---	---	---	---	1-5	---
Western raspberry	RULE	---	---	---	---	---	1-5	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	2-5
Curlleaf mountainmahogany	CELE3	---	15-25	---	---	1-5	---	---
Utah juniper	JUOS	---	---	---	---	1-5	---	---
Singleleaf pinyon	PIMO	---	---	---	---	---	1-5	---
Quaking aspen	POTRT	---	---	---	---	---	1-5	---
Engelmann spruce	PIEN	---	---	---	---	---	1-5	---

Range site number: 028BY027NV 028BY043NV 028BY063NV 028BY070NV 028BY060NV 028BY072NV 028BY048NV

Potential production (lb/acre):								
Favorable years	600	1,700	400	1,100	500	400	450	
Normal years	450	1,300	275	900	375	250	300	
Unfavorable years	300	900	150	600	250	100	150	

1570-Nyala-Broyles association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name		Inclusion number--	
		Nyala	Broyles	1	2
Indian ricegrass	ORHY	35-45	35-45	20-30	20-30
Bottlebrush squirreltail	SIHY	2-5	2-5	5-10	5-10
Sandberg bluegrass	POSE	5-10	5-10	2-5	2-5
Needleandthread	STCO4	---	---	10-20	10-20
Globemallow	SPHAE	1-5	1-5	---	---
Shadscale	ATCO	20-30	20-30	---	---
Winterfat	EULAS	5-10	5-10	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	25-35
Rabbitbrush	CHRSY9	---	---	2-5	2-5

Range site number:	028BY075NV	028BY075NV	028BY010NV	028BY010NV
Potential production (lb/acre):				
Favorable years	700	700	800	800
Normal years	500	500	600	600
Unfavorable years	300	300	400	400

1580-Wredah-Selti-Tulase association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Wredah	Selti	Tulase	1	2	3	4
Bluebunch wheatgrass	AGSP	5-10	5-10	---	---	---	---	1-5
Thurber needlegrass	STTH2	30-40	30-40	---	---	---	20-40	1-5
Bluegrass	POA++	2-8	2-8	---	---	---	2-5	---
Indian ricegrass	ORHY	2-5	2-5	5-10	20-30	---	5-10	1-5
Needleandthread	STCO4	2-8	2-8	---	10-20	---	5-10	---
Basin wildrye	ELCI2	---	---	10-20	---	70-80	---	1-5
Thicksipke wheatgrass	AGDA	---	---	5-10	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	---	---	---
Bottlebrush squirreltail	SIHY	---	---	---	5-10	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	---	---
Canby bluegrass	POCA	---	---	---	---	---	---	1-5
Tapertip hawksbeard	CRAC2	2-5	2-5	---	---	---	2-5	---
Arrowleaf balsamroot	BASA3	2-5	2-5	---	---	---	---	---
Crag aster	ASSC3	---	---	---	---	---	2-5	---
Big sagebrush	ARTR2	15-25	15-25	---	---	---	---	---
Antelope bitterbrush	PUTR2	2-10	2-10	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	25-35	---	20-30	---
Rabbitbrush	CHRSY9	---	---	---	2-5	---	---	---
Basin big sagebrush	ARTRT	---	---	---	---	5-10	---	---
Spiny hopsage	GRSP	---	---	---	---	---	2-5	---
Mountain big sagebrush	ARVA2	---	---	---	---	---	---	1-5
Singleleaf pinyon	PIMO	---	---	---	---	---	---	1-5
Utah juniper	JUOS	---	---	---	---	---	---	1-5

Range site number: 028BY007NV 028BY007NV 028BY045NV 028BY010NV 028BY003NV 028BY086NV 028BY062NV

Potential production (lb/acre):

Favorable years	1,000	1,000	1,000	800	5,000	800	700
Normal years	800	800	800	600	2,500	600	500
Unfavorable years	600	600	600	400	1,500	350	300

1610-Sheffit-Blimo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Sheffit	Blimo	1	2	3	4
Basin wildrye	ELCI2	10-20	---	2-5	---	---	70-80
Indian ricegrass	ORHY	2-10	15-25	---	---	10-25	---
Wheatgrass	AGROP2	---	5-10	---	---	---	---
Bottlebrush squirreltail	SIHY	---	2-8	---	5-15	---	---
Sandberg bluegrass	POSE	---	2-5	---	---	---	---
Alkali sacaton	SPAI	---	---	5-10	---	---	---
Inland saltgrass	DISPS2	---	---	2-8	---	---	---
Bluegrass	POA++	---	---	---	5-10	---	---
Thickspike wheatgrass	AGDA	---	---	---	---	5-15	---
Needleandthread	STCO4	---	---	---	---	2-5	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10
Big sagebrush	ARTR2	20-30	---	---	---	---	---
Rubber rabbitbrush	CHNA2	2-5	---	2-5	---	2-5	---
Black greasewood	SAVE4	30-40	---	60-75	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---
Winterfat	EULA5	---	5-15	---	---	---	---
Wyoming big sagebrush	ARTRW	---	30-40	---	60-70	---	---
Shadscale	ATCO	---	---	2-5	---	---	---
Fourwing saltbush	ATCA2	---	---	---	---	5-15	---
Basin big sagebrush	ARTRT	---	---	---	---	30-40	5-10
Spiny hopsage	GRSP	---	---	---	---	5-10	---

Range site number:	028BY028NV	028BY014NV	028BY020NV	028BY056NV	028BY068NV	028BY003NV
Potential production (lb/acre):						
Favorable years	800	600	500	450	800	5,000
Normal years	600	450	300	325	500	2,500
Unfavorable years	400	200	150	150	300	1,500

1700-Garfan-McIvey association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name			Inclusion number--		
		Garfan, gently sloping	Garfan, more sloping	McIvey	1	2	3
Thurber needlegrass	STTH2	5-15	5-15	---	---	10-20	---
Bluebunch wheatgrass	AGSP	10-25	10-25	30-40	20-30	30-40	---
Bluegrass	POA++	2-10	2-10	2-8	5-10	2-8	---
Needlegrass	STIPA	---	---	5-15	---	---	---
Basin wildrye	ELCI2	---	---	2-8	---	2-10	60-70
Indian ricegrass	ORHY	---	---	---	2-5	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10
Wheatgrass	AGROP2	---	---	---	---	---	5-10
Arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---
Antelope bitterbrush	PUTR2	1-10	1-10	2-8	5-15	2-10	---
Low sagebrush	ARAR8	25-35	25-35	---	---	---	---
Snowberry	SYMPH	---	---	5-10	---	---	---
Utah serviceberry	AMUT	---	---	5-10	30-40	---	---
Mountain big sagebrush	ARVA2	---	---	15-20	5-15	20-25	5-15
Willow	SALIX	---	---	---	---	---	2-5

Range site number:	028BY039NV	028BY039NV	028BY015NV	028BY091NV	028BY030NV	028BY024NV
Potential production (lb/acre):						
Favorable years	500	500	1,500	1,200	1,500	5,000
Normal years	350	350	1,100	900	1,200	2,500
Unfavorable years	200	200	700	700	900	1,500

1800-Pookaloo-Onkeyo-Cavehill association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Pookaloo	Onkeyo	Cavehill	1	2	3	4
Bluegrass	POA++	1-5	5-10	---	---	---	5-10	---
Indian ricegrass	ORHY	1-5	10-20	1-5	5-15	---	2-5	---
Bottlebrush squirreltail	SIHY	1-5	---	---	---	---	---	---
Bluebunch wheatgrass	AGSP	1-5	30-40	1-5	20-40	20-30	30-40	---
Thurber needlegrass	STTH2	1-5	---	1-5	---	---	---	---
Canby bluegrass	POCA	---	---	1-5	---	---	---	---
Basin wildrye	ELCI2	---	---	1-5	---	---	2-8	---
Needleandthread	STCO4	---	---	---	2-5	---	---	---
Muttongrass	POFE	---	---	---	2-5	---	---	---
Goldenweed	HAPLO2	---	---	---	2-5	---	---	---
Tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---	---
Black sagebrush	ARARN	1-5	---	---	25-35	---	---	---
Antelope bitterbrush	PUTR2	---	5-10	---	---	---	2-10	---
Mountain big sagebrush	ARVA2	---	15-25	1-5	---	15-25	15-25	---
Winterfat	EULA5	---	---	---	2-5	---	---	---
Shadscale	ATCO	---	---	---	2-5	---	---	---
Snowberry	SYMPH	---	---	---	---	2-8	2-5	---
Utah serviceberry	AMUT	---	---	---	---	---	1-5	---
Utah juniper	JUOS	1-5	---	1-5	---	---	---	---
Singleleaf pinyon	PIMO	1-5	---	1-5	---	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	---	---	15-25	---	---

Range site number:	028BY060NV	028BY079NV	028BY062NV	028BY008NV	028BY043NV	028BY088NV	None
Potential production (lb/acre):							
Favorable years	500	700	700	600	1,700	1,100	---
Normal years	375	500	500	400	1,300	900	---
Unfavorable years	250	300	300	200	900	700	---

1810-Ilton-Yody-Blimo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Ilton	Yody	Blimo	1	2	3	4
Bluegrass	POA++	1-5	2-5	---	---	---	---	---
Indian ricegrass	ORHY	1-5	5-10	15-25	15-25	20-30	20-30	15-25
Bottlebrush squirreltail	SIHY	1-5	---	2-8	2-5	5-10	5-10	2-5
Bluebunch wheatgrass	AGSP	1-5	---	---	2-5	---	---	2-5
Thurber needlegrass	STTH2	1-5	20-40	---	---	---	---	---
Needleandthread	STCO4	---	5-10	---	---	10-20	10-20	---
Wheatgrass	AGROP2	---	---	5-10	---	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	2-5	2-5	2-5	2-5
Pine needlegrass	STPI2	---	---	---	2-5	---	---	2-5
Crag aster	ASSC3	---	2-5	---	---	---	---	---
Tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
Black sagebrush	ARARN	1-5	---	---	40-50	---	---	40-50
Wyoming big sagebrush	ARTRW	---	20-30	30-40	---	25-35	25-35	---
Spiny hopsage	GRSP	---	2-5	---	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	2-5	---	---	2-5
Winterfat	EULA5	---	---	5-15	---	---	---	---
Rabbitbrush	CHRSY9	---	---	---	---	2-5	2-5	---
Utah juniper	JUOS	1-5	---	---	1-3	---	---	1-3
Singleleaf pinyon	PIMO	1-5	---	---	---	---	---	---

Range site number: 028BY060NV 028BY086NV 028BY014NV 028BY059NV 028BY010NV 028BY010NV 028BY059NV

Potential production (lb/acre):

Favorable years	500	800	600	400	800	800	400
Normal years	375	600	450	350	600	600	350
Unfavorable years	250	350	200	125	400	400	125

1820-Sodhouse association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name		Inclusion number--			
		Sodhouse	Sodhouse, eroded	1	2	3	4
Indian ricegrass	ORHY	35-45	2-5	30-50	10-20	15-25	10-20
Bottlebrush squirreltail	SIHY	2-5	---	2-5	5-15	2-5	2-5
Sandberg bluegrass	POSE	5-10	---	---	---	2-10	---
Scribner needlegrass	STSC2	---	2-10	---	---	---	---
Needleandthread	STCO4	---	---	---	---	5-15	---
Globemallow	SPHAE	1-5	---	---	2-5	---	2-5
Goldenweed	HAPLO2	---	5-10	---	---	---	---
Shadscale	ATCO	20-30	---	---	40-50	---	---
Winterfat	EULA5	5-10	---	20-30	---	---	2-5
Littleleaf mountainmahogany	CEIN7	---	60-70	---	---	---	---
Black sagebrush	ARARN	---	2-8	---	---	25-35	---
Desert snowberry	SYLO	---	2-8	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---	---
Bud sagebrush	ARSP5	---	---	2-8	10-15	---	---
Downy rabbitbrush	CHVIP4	---	---	---	---	2-5	---
Spiny hopsage	GRSP	---	---	---	---	---	10-20
Fourwing saltbush	ATCA2	---	---	---	---	---	15-30
Utah juniper	JUOS	---	1-3	---	---	---	---

Range site number:	028BY075NV	028BY066NV	028BY084NV	028BY017NV	028BY011NV	028BY078NV
Potential production (lb/acre):						
Favorable years	700	1,300	900	700	600	600
Normal years	500	1,000	700	400	400	500
Unfavorable years	300	800	400	250	250	400

1821-Sodhouse-Palinor association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name		Inclusion number--		
		Sodhouse	Palinor	1	2	3
Indian ricegrass	ORHY	10-20	15-25	10-20	30-50	35-45
Bottlebrush squirreltail	SIHY	5-15	2-5	5-15	2-5	2-5
Sandberg bluegrass	POSE	---	2-10	---	---	5-10
Needleandthread	STCO4	---	5-15	---	---	---
Globemallow	SPHAE	2-5	---	2-5	---	1-5
Shadscale	ATCO	40-50	---	40-50	---	20-30
Bud sagebrush	ARSP5	10-15	---	10-15	2-8	---
Black sagebrush	ARARN	---	25-35	---	---	---
Downy rabbitbrush	CHVIP4	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---
Winterfat	EULA5	---	---	---	20-30	5-10

Range site number:	028BY017NV	028BY011NV	028BY017NV	028BY084NV	028BY075NV
Potential production (lb/acre):					
Favorable years	700	600	700	900	700
Normal years	400	400	400	700	500
Unfavorable years	250	250	250	400	300

1830-Armespan-Cliffdown-Candelaria association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Armespan	Cliffdown	Candelaria	1	2
Galleta	HIJA	2-8	---	5-10	2-5	5-10
Needleandthread	STCO4	5-15	---	---	10-20	---
Desert needlegrass	STSP3	2-5	---	---	2-8	---
Indian ricegrass	ORHY	15-25	5-15	15-25	15-25	10-25
Sandberg bluegrass	POSE	2-5	---	---	---	---
Bottlebrush squirreltail	SIHY	1-5	5-10	2-8	2-8	1-5
Sand dropseed	SPCR	---	---	---	---	5-10
Black sagebrush	ARARN	25-35	---	---	---	---
Nevada Ephedra	EPNE	2-5	---	1-5	2-5	---
Winterfat	EULA5	2-5	60-70	5-10	---	2-8
Bud sagebrush	ARSP5	---	2-10	5-15	---	5-10
Bailey greasewood	SAVEB	---	---	0-10	---	---
Shadscale	ATCO	---	---	40-50	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	15-20
Fourwing saltbush	ATCA2	---	---	---	2-5	---

Range site number:	029XY008NV	029XY020NV	029XY017NV	029XY006NV	029XY049NV
Potential production (lb/acre):					
Favorable years	700	500	500	800	1,100
Normal years	500	350	350	600	800
Unfavorable years	250	200	200	300	500

1850-Clanlaine-Rubble land-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name			Inclusion number--	
		Clanlaine	Rubble land	Rock outcrop	1	2
Basin wildrye	ELCI2	1-5	---	---	1-5	2-8
Bluebunch wheatgrass	AGSP	1-5	---	---	1-5	20-40
Muttongrass	POFE	1-5	---	---	1-5	---
Canby bluegrass	POCA	1-5	---	---	1-5	---
Thurber needlegrass	STTH2	---	---	---	---	15-30
Bluegrass	POA++	---	---	---	---	2-5
Crag aster	ASSC3	---	---	---	---	2-5
Tapertip hawksbeard	CRAC2	---	---	---	---	2-5
Serviceberry	AMELA	1-5	---	---	1-5	---
Mountain big sagebrush	ARVA2	1-5	---	---	1-5	15-25
Antelope bitterbrush	PUTR2	1-5	---	---	1-5	5-10
Snowberry	SYMPH	1-5	---	---	1-5	---
Curleaf mountainmahogany	CELE3	1-5	---	---	1-5	---
Singleleaf pinyon	PIMO	1-5	---	---	1-5	---
Range site number:		028BY058NV	None	None	028BY058NV	028BY067NV
Potential production (lb/acre):						
Favorable years		500	---	---	500	900
Normal years		375	---	---	375	700
Unfavorable years		250	---	---	250	450

1860-Hackwood-Chen-Tusel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name			Inclusion number--			
		Hackwood	Chen	Tusel	1	2	3	4
Bluebunch wheatgrass	AGSP	1-5	20-30	---	1-5	10-20	---	---
Mountain brome	BRCA	1-5	---	---	---	---	---	---
Slender wheatgrass	AGTR	1-5	---	2-8	1-5	---	---	---
Sedge	CAREX	1-5	---	2-5	1-5	---	5-15	---
Columbia needlegrass	STNE3	1-5	---	2-8	---	---	---	---
Bluegrass	POA++	---	2-10	---	---	---	---	---
Mountain brome	BRCA5	---	---	15-20	1-5	---	---	---
Letterman needlegrass	STLE4	---	---	15-20	1-5	---	---	---
Spike-fescue	LEKI2	---	---	5-10	1-5	---	---	---
Nevada bluegrass	PONE3	---	---	---	1-5	---	50-60	---
Indian ricegrass	ORHY	---	---	---	---	2-5	---	---
Needlegrass	STIPA	---	---	---	---	5-10	---	---
Muttongrass	POFE	---	---	---	---	2-8	---	---
Meadow barley	HOBR2	---	---	---	---	---	5-10	---
Mat muhly	MURI	---	---	---	---	---	5-10	---
Kentucky bluegrass	POPR	---	---	---	---	---	2-5	---
Alpine timothy	PHAL2	---	---	---	---	---	20-30	---
Horsemint giant hyssop	AGUR	1-5	---	---	---	---	---	---
Creeping barberry	BERE	---	---	---	1-5	---	---	---
Mountain big sagebrush	ARVA2	1-5	---	15-25	---	15-25	---	---
Currant	RIBES	1-5	---	---	---	---	---	---
Snowberry	SYMPH	1-5	---	2-5	1-5	2-8	---	---
Low sagebrush	ARAR8	---	25-35	---	---	---	---	---
Antelope bitterbrush	PUTR2	---	2-5	---	---	---	---	---
Common juniper	JUCO6	---	---	---	1-5	---	---	---
Serviceberry	AMELA	---	---	---	1-5	---	---	---
Quaking aspen	POTRT	1-5	---	---	1-5	---	---	---
White fir	ABCO	---	---	---	1-5	---	---	---
Curlleaf mountainmahogany	CELE3	---	---	---	---	30-50	---	---

Range site number: 028BY067NV 028BY037NV 028BY029NV 028BY055NV 028BY032NV 028BY095NV None

Potential production (lb/acre):

Favorable years	800	800	1,700	600	1,300	1,600	---
Normal years	600	600	1,200	425	900	1,300	---
Unfavorable years	400	400	900	250	600	800	---

Appendix

Criteria Used in Rating Soils for Selected Uses

Shallow Excavations

Property	Limits			Restrictive feature
	Slight	Moderate	Severe	
1. USDA texture	---	---	Ice	Permafrost.
2. Depth to bedrock (inches):				
Hard	>60	40-60	<40	Depth to rock.
Soft	>40	20-40	<20	Depth to rock.
3. Depth to cemented pan (inches):				
Thick	>60	40-60	<40	Cemented pan.
Thin	>40	20-40	<20	Cemented pan.
4. USDA texture (20 to 60 inches)	---	¹ SI	COS, S, FS, VFS, LCOS, LS, LFS, LVFS, G, SG	Cutbanks cave.
5. USDA texture (20 to 60 inches)	---	C, SIC	---	Too clayey.
6. Soil order	---	---	Vertisols	Cutbanks cave.
7. Bulk density between depths of 20 and 60 inches (g/cc)	---	>1.8	---	Dense layer.
8. Unified (20 to 60 inches)	---	---	OL, OH, PT	Excess humus.
9. Fraction greater than 3 inches (percent by weight) ²	<25	25-50	>50	Large stones.
10. Depth to high water table (feet)				
	---	---	+	Ponding.
	>6	2.5-6	<2.5	Wetness.
11. Flooding	None, rare	Common	---	Flooding.
12. Slope (percent)	<8	8-15	>15	Slope.
13. Downslope movement	---	---	(3)	Slippage.

¹ In areas of loess, rating should be *slight*.

² Weighted average to 40 inches.

³ If the soil is susceptible to movement downslope when loaded, excavated, or wet, rate *severe*—*slippage*.

Local Roads and Streets

Property	Limits			Restrictive feature
	Slight	Moderate	Severe	
1. USDA texture	---	---	Ice	Permafrost.
2. Total subsidence (inches)	---	---	>12	Subsides.
3. Depth to bedrock (inches):				
Hard	>40	20-40	<20	Depth to rock.
Soft	>20	<20	---	Depth to rock.
4. Depth to cemented pan (inches):				
Thick	>40	20-40	<20	Cemented pan.
Thin	>20	<20	---	Cemented pan.
5. Shrink-swell potential ¹	Low	Moderate	High, very high	Shrink-swell.
6. AASHTO group index number ^{1 2 3}	<5	5-8	>8	Low strength.
7. Depth to high water table (feet)	---	---	+	Ponding.
	>2.5	1.0-2.5	<1.0	Wetness.
8. Slope (percent)	<8	8-15	>15	Slope.
9. Flooding	None	Rare	Common	Flooding.
10. Potential for frost action	Low	Moderate	High	Frost action.
11. Fraction greater than 3 inches (percent by weight) ⁴	<25	25-50	>50	Large stones.
12. Downslope movement	---	---	(5)	Slippage.
13. Formation of pits	---	---	(6)	Pitting.
14. Differential settling	---	---	(7)	Unstable fill.

¹ Thickest layer between 10 and 40 inches.² $GIN = (F-35)[.2 + .005(LL-40)] + .01 (F-15)(PI-10)$ where F = percent passing No. 200 sieve. If F is ≤ 35 and PI is ≥ 11 , use only part 2 of equation. Use median values.³ Rate one class better if the soil is in kaolinitic family and experience confirms.⁴ Weighted average to 40 inches.⁵ If the soil is susceptible to movement downslope when loaded, excavated, or wet, rate *severe—slippage*.⁶ If the soil is susceptible to the formation of pits caused by the melting of ground ice when the ground cover is removed, rate *severe—pitting*.⁷ If the soil is susceptible to differential settling, rate *severe—unstable fill*.

Roadfill

Property	Limits			Restrictive feature
	Good	Fair	Poor	
1. USDA texture	---	---	Ice	Permafrost.
2. Depth to bedrock (inches)	>60	40-60	<40	Depth to rock.
3. Depth to thick cemented pan (inches)	>60	40-60	<40	Cemented pan.
4. Shrink-swell potential ¹	Low	Moderate	High, very high	Shrink-swell.
5. AASHTO group index number ^{1 2 3}	<5	5-8	>8	Low strength.
6. Layer thickness (inches)	>60	30-60	<30	Thin layer.
7. Fraction greater than 3 inches (percent by weight) ⁴	<25	25-50	>50	Large stones.
8. Depth to high water table (feet)	>3	1-3	<1	Wetness.
9. Slope (percent)	<15	15-25	>25	Slope.
10. Content of gypsum (percent)	---	10-15	>15	Excess gypsum.

¹ Evaluate the thickest layer between 10 and 60 inches and also the bottom layer. Choose the best rating. When rating is based on the bottom layer, verify thickness.

² $GIN = (F-35)[.2 + .005(LL-40)] + .01 (F-15)(PI-10)$ where F = percent passing No. 200 sieve. If F is ≤ 35 and PI is ≥ 11 , use only part 2 of equation. Use median values.

³ Rate one class better if the soil is in kaolinitic family and experience confirms.

⁴ Weighted average to 40 inches.

Sand

Property	Limits		Restrictive feature
	Probable source	Improbable source	
1. USDA texture	---	Ice	Permafrost.
2. Unified ¹	SW, SP, SW-SM, SP-SM	---	---
	² GW, ² GP, ² GW-GM, ² GP-GM	---	---
	---	³ GW, ³ GP, ³ GW-GM, ³ GP-GM	Small stones.
	---	PT	Excess humus.
	---	All other	Excess fines.
3. Layer thickness (inches)	>36	<36	Thin layer.
4. Fraction greater than 3 inches (percent by weight) ⁴	<50	>50	Large stones.

¹ Evaluate the thickest layer between 10 and 60 inches and also the bottom layer. Choose the best rating. When rating is based on the bottom layer, verify thickness.

² Percent passing No. 4 sieve minus percent passing No. 200 sieve is greater than 25.

³ Percent passing No. 4 sieve minus percent passing No. 200 sieve is less than 25.

⁴ Thickest layer between 10 and 60 inches.

Gravel

Property	Limits		Restrictive feature
	Probable source	Improbable source	
1. USDA texture	---	Ice	Permafrost.
2. Unified ¹	GW, GP, GW-GM, GP-GM ² SW, ² SP, ² SW-SM, ² SP-SM	---	---
	---	³ SW, ³ SP, ³ SW-SM, ³ SP-SM	Too sandy.
	---	PT	Excess humus.
	---	All other	Excess fines.
3. Layer thickness (inches)	>36	<36	Thin layer.
4. Fraction greater than 3 inches (percent by weight) ⁴	<50	>50	Large stones.

¹ Evaluate the thickest layer between 10 and 60 inches and also the bottom layer. Choose the best rating. When rating is based on the bottom layer, verify thickness.

² 100 minus percent passing No. 4 sieve is greater than 25.

³ 100 minus percent passing No. 4 sieve is less than 25.

⁴ Thickest layer between 10 and 60 inches.

Embankments, Dikes, and Levees

Property	Limits			Restrictive feature
	Slight	Moderate	Severe	
1. USDA texture	---	---	Ice	Permafrost.
2. Layer thickness (inches)	>60	30-60	>30	Thin layer.
3. Unified ¹	---	---	GW, GP, SW, SP, GW-GM, GP-GM, SW-SM, SP-SM, ² SM, ² GM	Seepage.
4. Unified ¹	---	³ GM, ⁴ CL	⁵ ML, ⁶ SM, ⁶ SP, CL-ML	Piping.
5. Unified ¹	---	---	PT, OL, OH	Excess humus.
6. Unified ¹	---	---	MH, ⁷ CH	Hard to pack.
7. Fraction greater than 3 inches (percent by weight) ⁸	<15	15-35	>35	Large stones.
8. Depth to high water table (feet)	---	---	+	Ponding.
Apparent	>4	2-4	<2	Wetness.
Perched	>3	1-3	<1	Wetness.
9. Sodium adsorption ratio in the upper 40 or great group or phase	---	---	>12 (natric, halic, alkali phases)	Excess sodium.
10. Salinity at any depth (mmhos/cm)	<8	8-16	>16	Excess salt.
11. Content of gypsum (percent)	---	5-10	>10	Excess gypsum.

¹ Thickest layer between 10 and 60 inches.

² Rate *moderate* if more than 20 percent passing No. 200 sieve and *slight* if more than 30 percent passing No. 200 sieve.

³ Rate *slight* if less than 35 percent passing No. 200 sieve, less than 50 percent passing No. 40 sieve, and less than 65 percent passing No. 10 sieve. The soil must meet all three criteria before it is rated *slight*.

⁴ Rate *slight* if PI is greater than 15.

⁵ Rate *moderate* if PI is greater than 10.

⁶ Rate *moderate* if less than 70 percent passing No. 40 sieve and less than 90 percent passing No. 10 sieve, and rate *slight* if less than 60 percent passing No. 40 sieve and less than 75 percent passing No. 10 sieve.

⁷ Rate *moderate* if PI is less than 40.

⁸ Weighted average to 40 inches.

Range Seeding

Property	Limits			Restrictive feature
	Good	Fair	Poor	
1. Moisture regime	Aquic, xeric, ustic, and xeric and ustic bordering on aridic or torric.	Aridic and torric bordering on aquic, xeric, or ustic.	Aridic or torric	Too arid.
2. Effective moisture ¹	>10 in. (25 cm)	7-10 in. (17.5-25 cm)	<7 in. (17.5 cm)	Too arid.
3. Available water capacity	Surface 10 in. (27 cm) >1.25 in. (3.2 cm). Soil profile >4 in. (10.2 cm).	Surface 10 in. (25 cm) 0.75-1.25 in. (1.9-3.2 cm). Soil profile 2.5-4 in. (6.4-10.2 cm).	Surface 10 in. (25 cm) <0.75 in. (1.9 cm). Soil profile <2.5 in. (6.4 cm).	Droughty.
4. Texture in surface 7 in. (17.5 cm)	LVFS, COSL, SL, FSL, VFSL, L, SIL, SCL, and CL and SICL with <35% C.	VFS, LFS, SC, SIC, C, and CL and SICL with >35% C.	LS, LCOS, FS, COS	Too sandy. Too clayey.
5. Rock fragments in surface 7 in. (17.5 cm)	GR <35%; CB <15%; ST <3%. Total rock fragments <35%.	GR <35%; CB 15-35%; ST 3-15%. Total rock fragments <35%.	GR >35%; CB >35%; ST >15%. Total rock fragments >35%.	Small stones. Large stones.
6. Depth to abrupt A-B texture boundary ²	>10 in. (25 cm)	>10 in. (25 cm)	<10 in. (25 cm)	Rooting depth.
7. Depth to bedrock or hardpan	>20 in. (50 cm)	10-20 in. (25-50 cm)	<10 in. (25 cm)	Depth to rock. Cemented pan.
8. Electrical conductivity (saturation extract at 25 degrees C)	<2 mmhos/cm (0.2 s/m) in upper 20 in. (50 cm).	2-4 mmhos/cm (0.2-0.4 s/m) in upper 10 in. (25 cm) and 4-8 mmhos/cm (0.4-0.8 s/m) between 10 and 20 in. (25 and 50 cm).	>4 mmhos/cm (0.4 s/m) in upper 10 in. (25 cm) and/or >8 mmhos/cm (0.8 s/m) between 10 and 20 in. (25 and 50 cm).	Excess salt.
9. Sodium adsorption ratio	<8 in upper 20 in. (50 cm).	8-13 in upper 10 in. (25 cm) and <20 between 10 and 20 in. (25 and 50 cm).	>13 in upper 10 in. (25 cm) and/or >20 between 10 and 20 in. (25 and 50 cm).	Excess sodium.
10. K x % slope ³	<4 ⁴ ; <6 ⁵	4-6 ⁴ ; 6-8 ⁵	>6 ⁴ ; >8 ⁵	Erodes easily.
11. I x C ⁶	<60	<60	>60	Soil blowing.

Range Seeding—Continued

Property	Limits			Restrictive feature
	Good	Fair	Poor	
12. Soil surface morphological types ⁷	Types I and II >60%; Type IV <5%; or with a mollic epipedon ⁸	Types I and II 20-60%; Type IV <10% ⁸	Type III <60%; Type IV >10% ⁸	Too crusty.

¹ Moisture from precipitation, run-on, and ground water budgeted to actual evapotranspiration.

² Rate Vertisols and Vertic subgroups as poor.

³ Sheet and rill erosion hazard (bare soil).

⁴ For ustic bordering on aridic or torric and for aridic and torric bordering on ustic moisture regimes.

⁵ For xeric, xeric bordering on aridic or torric, and aridic or torric bordering on xeric moisture regimes.

⁶ Wind erosion hazard (bare soil).

⁷ See: (1) Final report. Properties, Occurrence and Management of Soils with Vesicular Surface Horizons. 1977. Contract No. 52500-CT 5(N). USDI-BLM and UNR-Agric. Exp. Stn. Eckert, Peterson, Wood, and Blackburn; and (2) Final report. Properties, Occurrence and Management of Soils with Vesicular Surface Horizons—Effects of Trampling on Seedling Emergence. 1979. Contract No. YA 512-CT 7-14. USDI-BLM and UNR-Agric. Exp. Stn. Stephens, Eckert, and Peterson.

⁸ Soils without crusting morphology are to be included in Types I and II for rating.

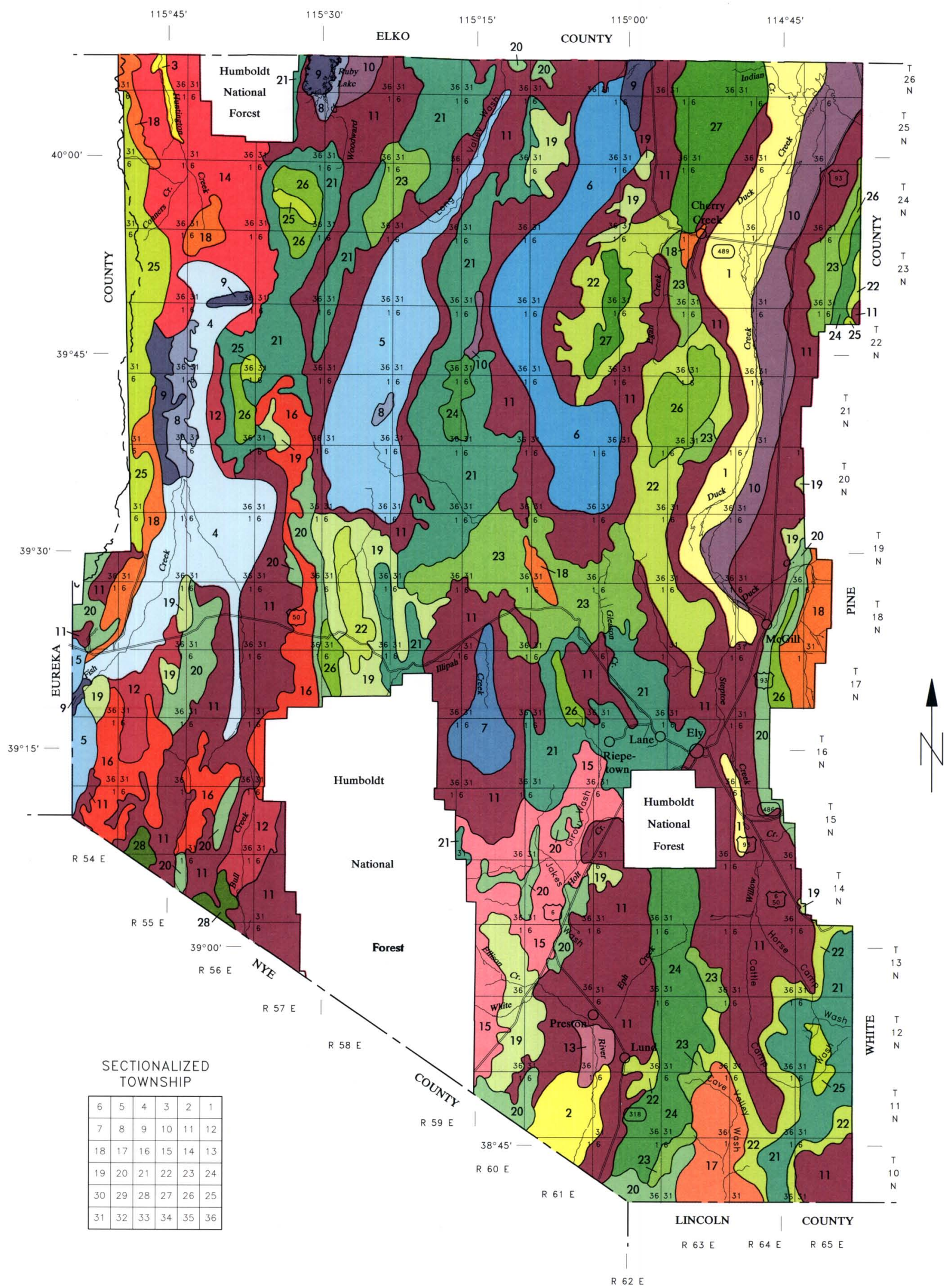
Guide for Estimating the Hazard of Erosion on Bare Soil in Nevada

("K" means erosion factor K, "S" means slope, "I" means wind erodibility index, and "C" means climatic factor)

Rating	Water (K x S)	Wind (I x C)
Slight	<4	<60
Moderate	4-8	60-100
High	>8	>100

NRCS Accessibility Statement

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SECTIONALIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SOIL LEGEND*

AREAS DOMINATED BY SOILS ON FLOOD PLAINS, FAN PIEDMONTS AND STREAM TERRACES

- 1 Equis-Kunzler-Duffer
- 2 Duffer-Kunzler
- 3 Sonoma-Kelk-Hunnton

AREAS DOMINATED BY SOILS ON BASIN FLOORS

- 4 Katelana-Sheffit-Playas
- 5 Uwell-Zimwala-Katelana
- 6 Sheffit-Blimo-Uwell
- 7 Doten-Heist-Bylo
- 8 Playas-Orupa
- 9 Equis-Kolda-Sheffit

AREAS DOMINATED BY SOILS ON FAN PIEDMONTS

- 10 Wintermute-Kunzler-Sycomat
- 11 Palinor-Shabliss-Blimo
- 12 Wintermute-Palinor-Urmafot
- 13 Bylo-Nyala-Breko
- 14 Hunnton-Yody-Chiara
- 15 Palinor-Urmafot-Biken
- 16 Palinor-Roden-Urmafot
- 17 Wredah-Tulase-Urmafot
- 18 Cowgil-Cassiro-Yody

AREAS DOMINATED BY SOILS ON HILLS AND MOUNTAINS

- 19 Atlow-Upatad-Pioche
- 20 Zimbob-Pookaloo-Hyzen
- 21 Pookaloo-Zimbob-Cavehill
- 22 Pookaloo-Hyzen-Cavehill
- 23 Birchcreek-Segura-Pioche
- 24 Cavehill-Haunchee-Hyzen
- 25 McIvey-Hutchley-Segura
- 26 Hardol-Haunchee-Wardbay
- 27 Haunchee-Hardzem-Wardbay
- 28 Stewval-Pioche

*The units on this legend are described in the text under the heading "General Soil Map Units."

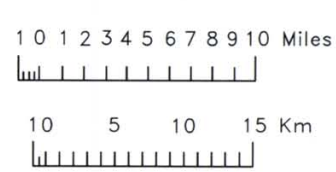
Compiled 1990

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UNIVERSITY OF NEVADA AGRICULTURAL EXPERIMENT STATION

GENERAL SOIL MAP

WESTERN WHITE PINE COUNTY AREA, NEVADA
PARTS OF WHITE PINE AND EUREKA COUNTIES

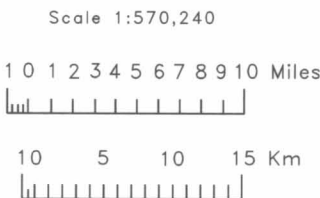
Scale 1:570,240



Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.



INDEX TO MAP SHEETS
WESTERN WHITE PINE COUNTY AREA, NEVADA
PARTS OF WHITE PINE AND EUREKA COUNTIES



SOIL LEGEND

Map symbols consist of three and four digit numbers. The map symbols are non-connotative.

SYMBOL	NAME	SYMBOL	NAME
100	Pookaloo-Cavehill-Rock outcrop association	471	Hessing-Tulase association
104	Pookaloo-Zimbo-Hyzen association	472	Broyles-Blimo association
108	Pookaloo-Tecomar-Rock outcrop association	473	Broyles-Sheffit-Katelana association
109	Hyzen-Cavehill association	480	Pioche-Cropper association
110	Zimbo association	481	Pioche-Segura-Cropper association
111	Zimbo-Hyzen-Rock outcrop association	483	Pioche-Upatad-Birchcreek association
113	Zimbo-Pookaloo association	484	Pioche-Birchcreek-Cropper association
119	Zimbo-Palino association	486	Pioche-Cropper-Upatad association
120	Tecomar-Pookaloo-Zimbo association	489	Pioche-McIvey-Birchcreek association
124	Tecomar-Pookaloo association	490	Kunzler loam, 0 to 2 percent slopes
126	Tecomar-Xine-Pookaloo association	491	Kunzler-Katelana association
160	Zerk-Heist-Tosser association	500	Segura-McIvey-Hutchley association
162	Broyles-Kunzler-Heist association	510	Onkeyo-Cavehill-Pookaloo association
166	Tosser-Pyrat-Linoy association	520	McIvey-Pioche association
170	Blimo-Hessing-Zerk association	531	Duffer-Uwell association
173	Tulase-Yody-Heist association	534	Duffer-Kolda association
174	Blimo-Pyrat association	540	Kolda-Sheffit-Equis association
179	Tulase-Pern association	541	Kolda-Duffer association
181	Pyrat-Cowgil-Broyles association	542	Devilsgait-Duffer association
185	Pyrat-Heist-Tulase association	550	Molion-Unsel-Breko association
189	Pyrat-Linoy association	552	Molion very gravelly sandy loam 2 to 8 percent slopes
190	Cowgil-Yody-Fax association	561	McIvey-Pioche-Upatad association
192	Cowgil-Yody association	564	McIvey-Chen-Suak association
201	Hyzen-Pookaloo-Tecomar association	566	McIvey-Segura-Cropper association
205	Hyzen-Hardzem-Rock outcrop association	567	McIvey-Birchcreek-Hutchley association
220	Hutchley-McIvey-Suak association	570	Yody-Blimo-McConnel association
223	Hutchley-McIvey-Pookaloo association	573	Yody-Palino-Shabliss association
224	Hutchley-McIvey-Segura association	575	Yody-Broyles association
226	Hutchley-Tusel-Suak association	578	Yody gravelly sandy loam, 2 to 4 percent slopes
230	Linoy-Katelana association	580	Uwell-Kelk association
231	Linoy very fine sandy loam, 0 to 2 percent slopes	590	Raph-Katelana-Zimwala association
232	Linoy-Heist-Tulase association	602	Blimo-Nyak-Raph association
233	Linoy silt loam, 0 to 2 percent slopes	603	Blimo-Uwell association
241	Katelana, level-Raph association	605	Blimo-Heist-Tosser association
242	Katelana association	610	Broyles-Heist-Unsel association
243	Katelana-Heist-Nyak association	620	Unsel-Broyles association
244	Katelana-Raph association	621	Nyala-Breko-Unsel association
246	Katelana-Blimo association	630	Molion-Haarvar association
250	Sheffit-Katelana association	631	Roden-Haarvar association
252	Sheffit-Equis association	632	Roden-Haarvar association, steep
253	Sheffit-Zorravista association	633	Roden-Izar association
254	Sheffit-Boofuss association	640	Uwell-Katelana association
255	Sheffit-Kunzler association	642	Kunzler-Linoy association
262	Equis silt loam, 0 to 2 percent slopes	643	Kunzler-Bylo-Zimwala association
266	Equis-Kolda association	645	Kunzler-Blimo-Uwell association
267	Equis-Devilsgait association	650	Eaglepass-Kyler-rock outcrop association
270	Atlow-Maderbak-Rubble land association	660	Stewval-Rock outcrop complex
271	Atlow association	670	Cavehill-Grink-Rock outcrop association
275	Atlow-Upatad association	680	Genaw-Puett-Abgese association
276	Stewval-Maderbak-Atlow association	690	Devilsgait-Cassiro association
279	Atlow-Broland-Yody association	710	Raph loam, 0 to 2 percent slopes
282	Palino very gravelly loam, 2 to 15 percent slopes	730	Zimwala-Uwell-Zimwala, moist association
283	Palino-Urmatot association	731	Zimwala-Uwell association
286	Palino-Shabliss association	740	Orupa-Uwell association
287	Palino-Wintermute association	741	Orupa association
288	Palino-Yody-Broland association	750	Upatad-Atlow association
290	Palino-Shabliss-Tulase association	751	Upatad-Pookaloo association
291	Urmatot-Borvant-Biken association	752	Upatad-Atlow-Pioche association
292	Palino-Urmatot-Urmatot, very shallow association	753	Upatad-Cropper-Atlow association
295	Palino-Roden association	760	Segura-Upatad-Cropper association
296	Palino-Urmatot-Palino, steep association	762	Segura-Eoj-Cassiro association
297	Urmatot-Amelar-Izar association	763	Segura-Pioche-McIvey association
300	Playas-Orupa association	770	Cropper-Birchcreek-Segura association
310	Dune land- Playas association	774	Cropper-Rubble land association
321	Palino association	780	Bobs-Orr-Urmatot association
322	Palino-Roden-Urmatot association	783	Bobs very gravelly loam, 2 to 8 percent slopes
323	Urmatot-Bobs-Palino association	790	Bylo-Tulase association
326	Palino-Urmatot-Roden association	793	Bylo silt loam, 0 to 2 percent slopes
327	Urmatot-Cassiro-Biken association	800	Broland association
328	Urmatot-Tecomar-Pookaloo association	801	Broland very gravelly loam, 4 to 8 percent slopes
334	Parisa-Palino-Shabliss association	802	Broland-Yody association
336	Parisa gravelly loam, 2 to 8 percent slopes	803	Broland-Broyles association
337	Parisa-Wintermute association	810	Yody-Fax association
338	Parisa-Palino-Tulase association	822	Pits-Dumps complex
340	Izar association	823	Dumps
346	Izar-Roden-Zerk association	830	Genaw-Tulase association
351	Heist-Tulase association	842	Orr-Fax association
353	Heist silt loam, 0 to 4 percent slopes	850	Onkeyo-Pookaloo-Adobe association
356	Heist-Wintermute association	851	Grink-Onkeyo-Xine association
360	Belmill association	852	Grink-Onkeyo-Halacan association
361	Belmill-Cowgil-Selt association	870	Amelar-Eoj association
372	Automal gravelly silt loam, 2 to 4 percent slopes	871	Amelar-Urmatot association
373	Automal-Wintermute association	874	Amelar-Pookaloo-Tulase association
380	Palino-Parisa association	875	Amelar-Eoj-Hardol association
411	Cassiro association	876	Amelar-Xine-Halacan association
413	Cassiro-Fax-Belmill association	880	Wredah-Amelar-Orr association
414	Cassiro-Belmill association	900	Abgese-Roden-Orr association
421	Wintermute gravelly sandy loam, 0 to 4 percent slopes	902	Abgese-Risley-Roden association
425	Wintermute association	911	Devilsgait-Duffer-Kunzler association
434	Pookaloo-Hyzen association	913	Devilsgait silt loam, 0 to 2 percent slopes
436	Pookaloo-Hyzen-Cavehill association	920	Abgese-Yody-Shabliss association
437	Pookaloo-Urmatot-Tulase association	930	Tosser loam, 0 to 4 percent slopes
440	Hessing-Zerk association	940	Nyak-Heist association
450	Shabliss-Yody association	951	Nyak-Uwell-Pern association
455	Shabliss-Tulase-Linoy association	960	Doten-Bylo-Heist association
458	Shabliss-Pyrat-Palino association	970	Doten association

CONVENTIONAL AND SPECIAL
SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

County or parish

Reservation (national forest or park, state forest or park, and large airport)

Limit of soil survey (label)

Field sheet matchline and neatline

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNER
(sections and land grants)

ROADS

Other roads

ROAD EMBLEM & DESIGNATIONS

Federal U. S. 93, 50, 6

State St. 35

RAILROAD

DAMS

Large (to scale)

PITS

Gravel pit

Mine or quarry

WATER FEATURES

DRAINAGE

Perennial, single line

Intermittent

Drainage end

LAKES, PONDS AND RESERVOIRS

Perennial

MISCELLANEOUS WATER FEATURES

Marsh or swamp

Spring

Wet spot

SPECIAL SYMBOLS FOR
SOIL SURVEY

SOIL DELINEATIONS AND SYM-BOLS

MISCELLANEOUS

Prominent hill or peak

Rock outcrop (includes sandstone and shale)

Sandy spot

Aquic Calciorthids; squawbush vegetation (1 to 5 acres)

Aquic Calciorthids, flooded; Fremont barberry vegetation (1 to 5 acres)

Cumulic Haplaquolls; wet meadow vegetation (1 to 5 acres)

Pachic Cryoborolls; chokecherry vegetation (1 to 5 acres)

Cumulic Haplaquolls; riparian aspen (1 to 5 acres)

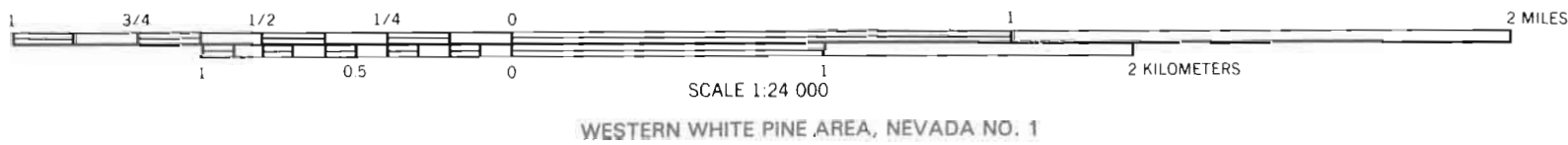
Lithic Argixerolls, curlleaf mountainmahogany vegetation (1 to 5 acres)

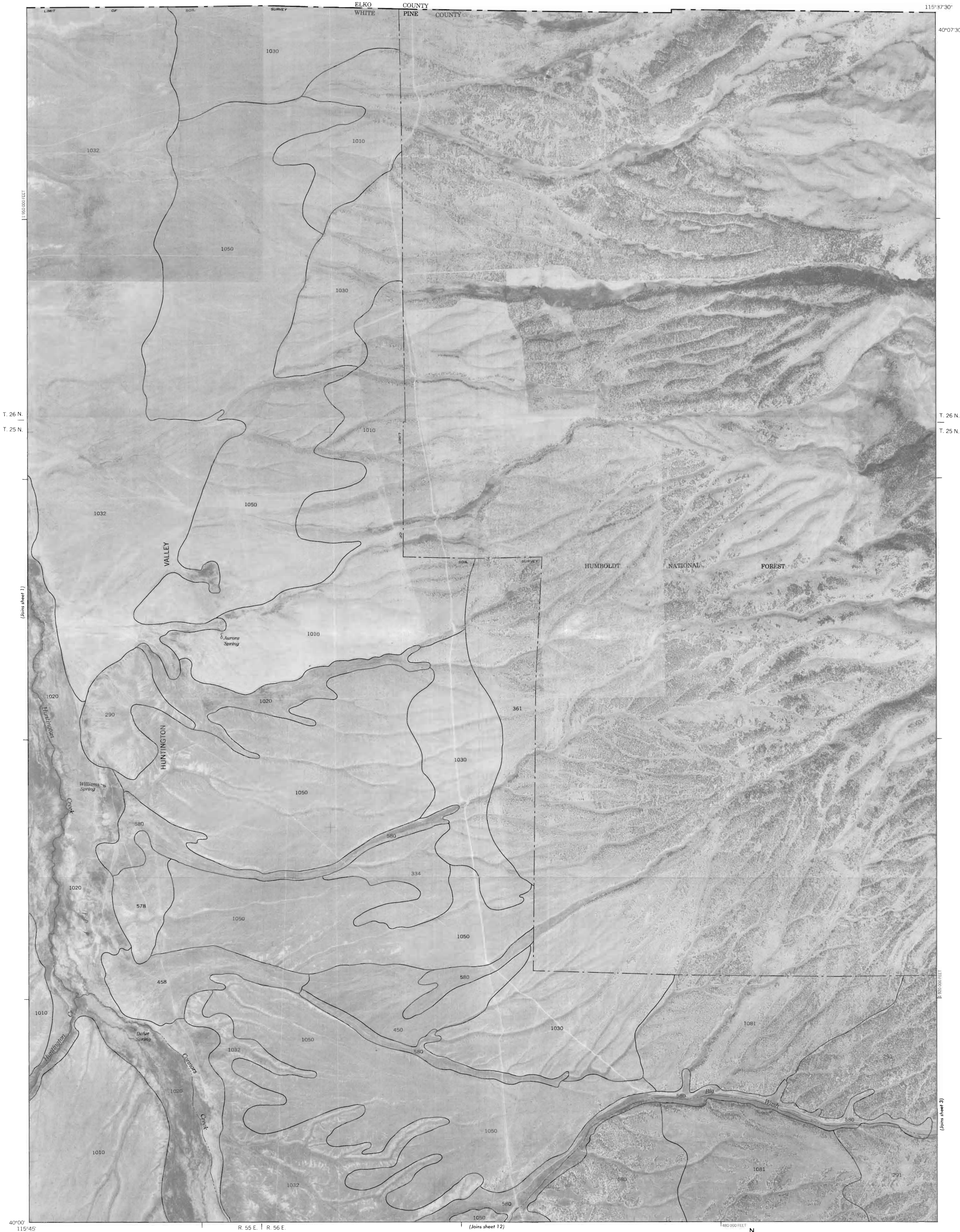
Typic Haplaquolls; willow, rose, chokecherry, dogwood (1 to 5 acres)

Lithic Haploxerolls; littleleaf mountainmahogany (1 to 5 acres)

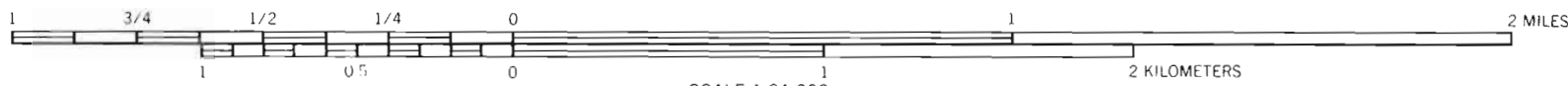


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.





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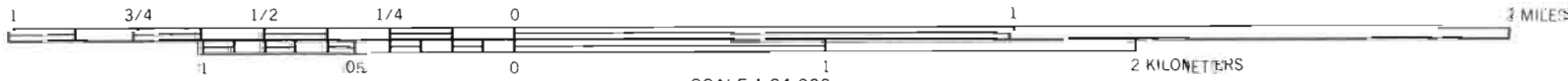


WESTERN WHITE PINE AREA, NEVADA NO. 2



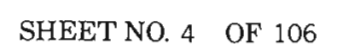


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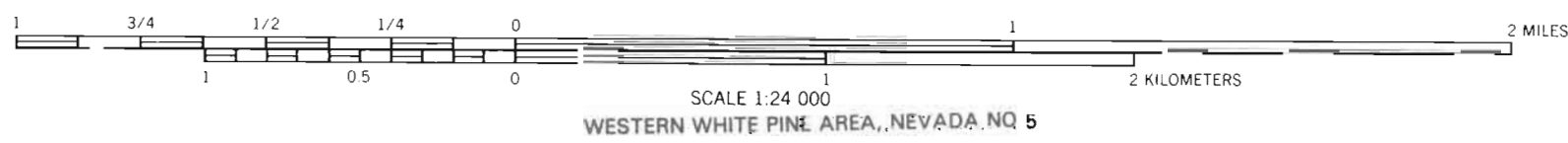
WESTERN WHITE PINE AREA, NEVADA NO. 3





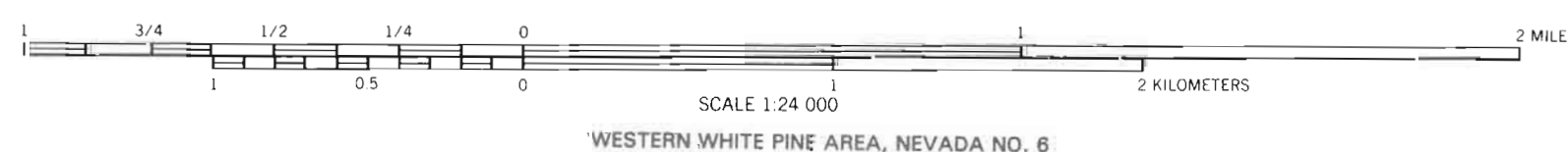


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



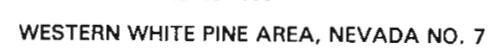
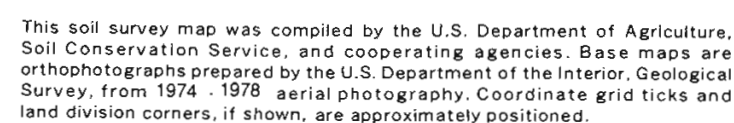


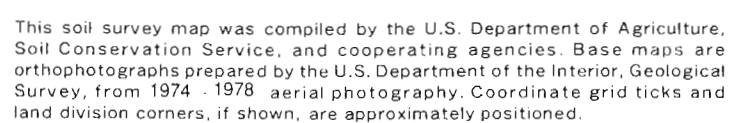
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

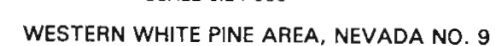
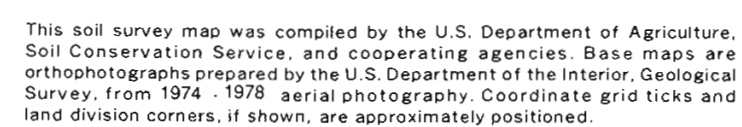


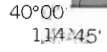
R. 60 E. | R. 61 E.

N







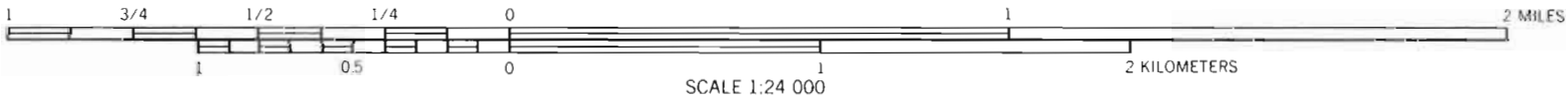
[illegible]

WESTERN WHITE PINE AREA, NEVADA NO. 10





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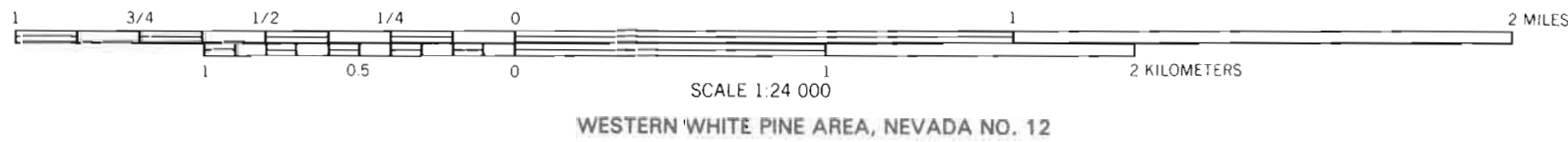


WESTERN WHITE PINE AREA, NEVADA NO. 11



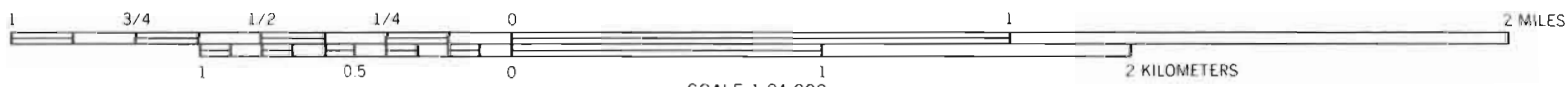


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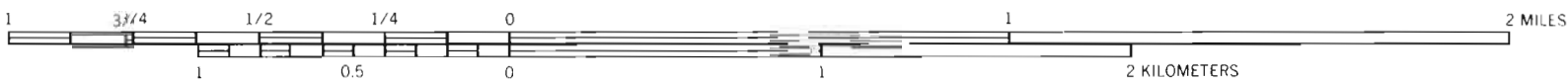
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



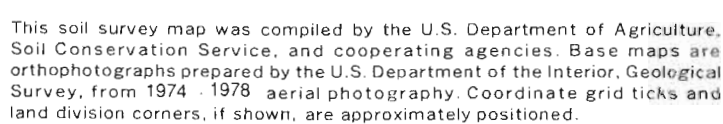
WESTERN WHITE PINE AREA, NEVADA, NO. 13



This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

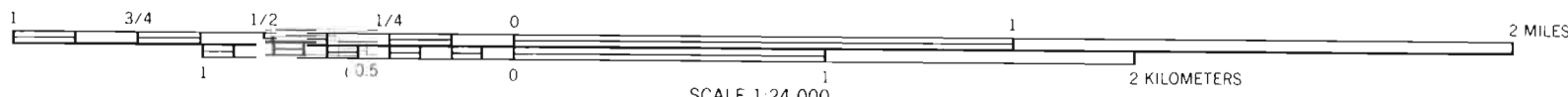


WESTERN WHITE PINE AREA, NEVADA NO. 14



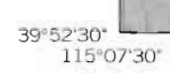


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



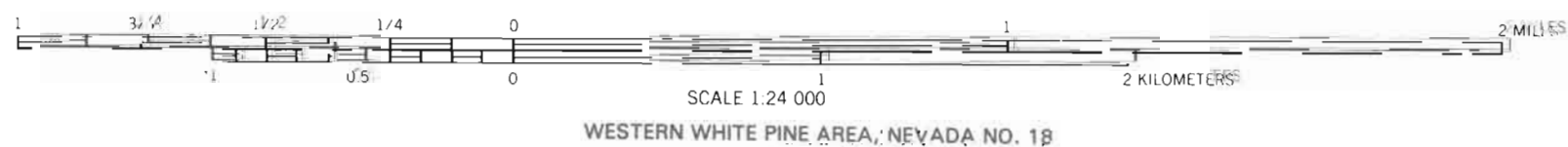
WESTERN WHITE PINE AREA, NEVADA NO. 16







This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



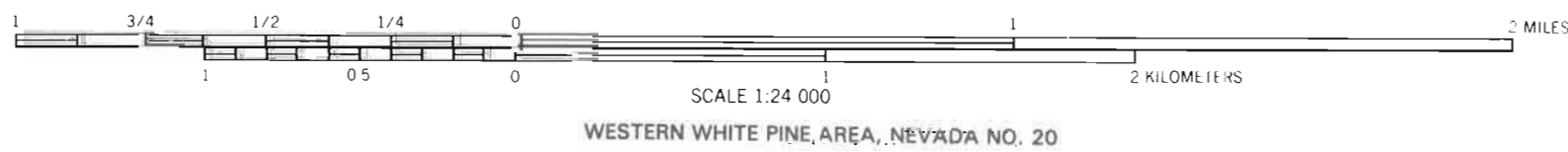
WESTERN WHITE PINE AREA, NEVADA NO. 18



WESTERN WHITE PINE AREA, NEVADA NO. 19

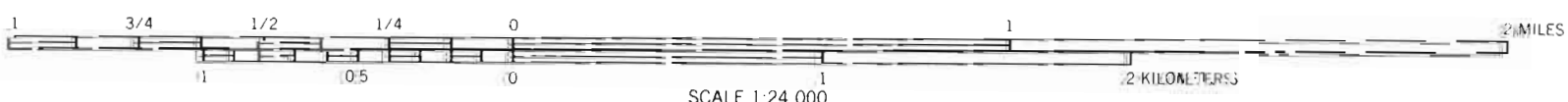


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



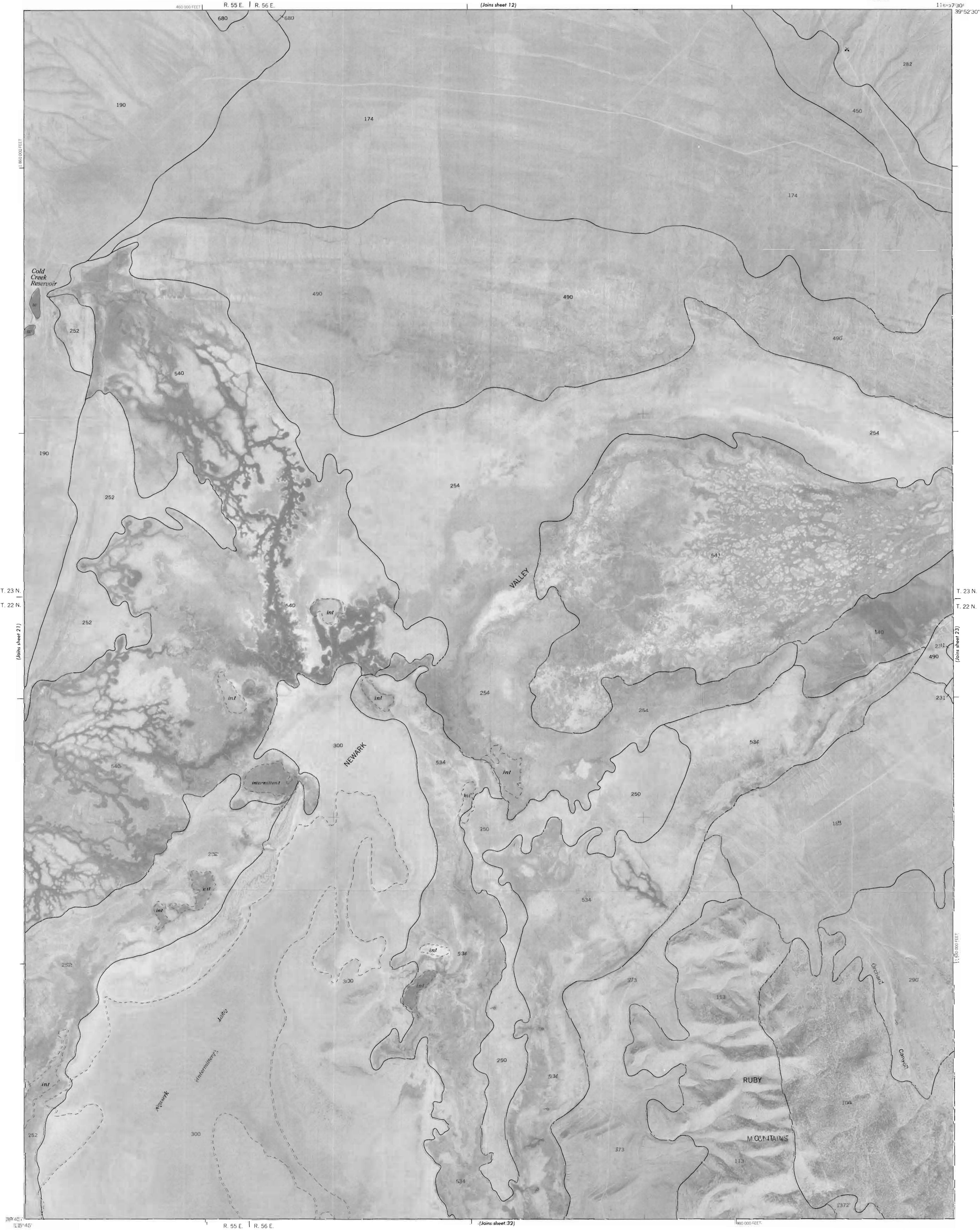


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

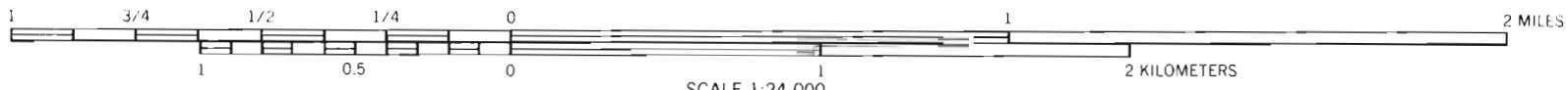


WESTERN WHITE PINE AREA, NEVADA NO. 21





This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 22.

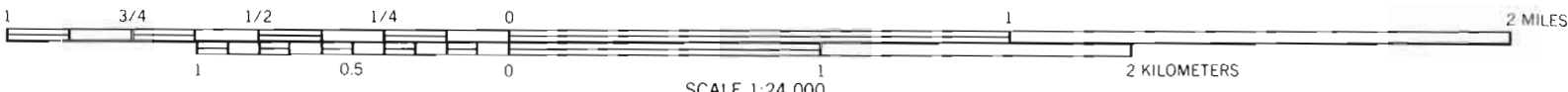




WESTERN WHITE PINE AREA, NEVADA NO. 23

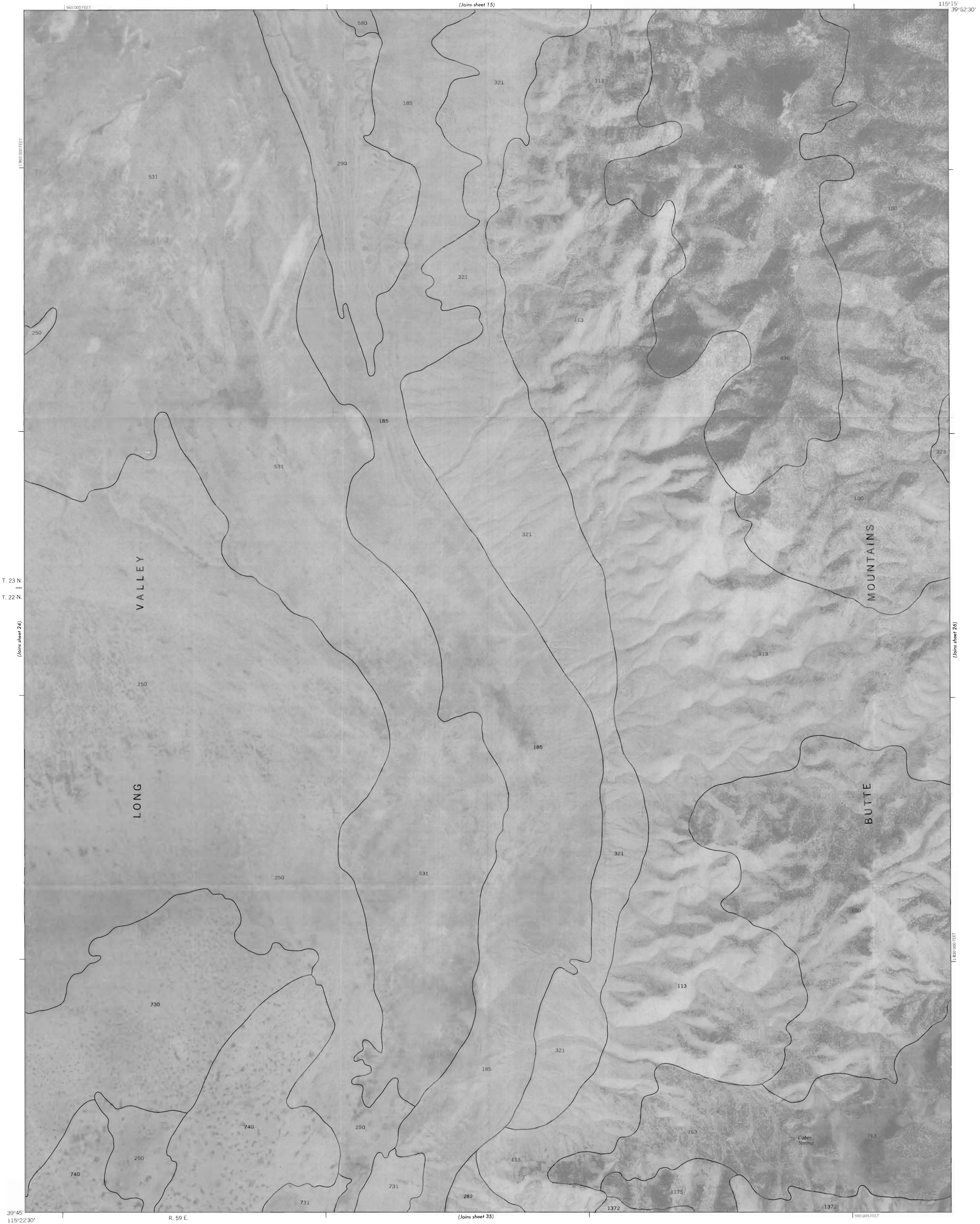


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

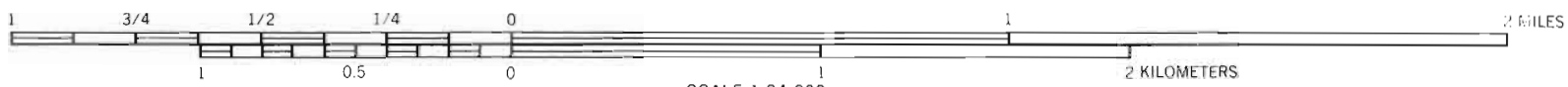


WESTERN WHITE PINE AREA, NEVADA NO. 24





This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1975 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

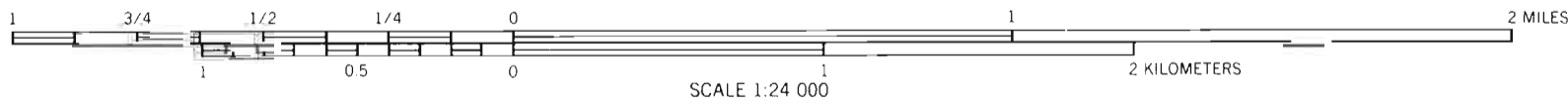


WESTERN WHITE PINE AREA, NEVADA NO. 25

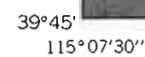




This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE-PINE AREA, NEVADA NO. 26

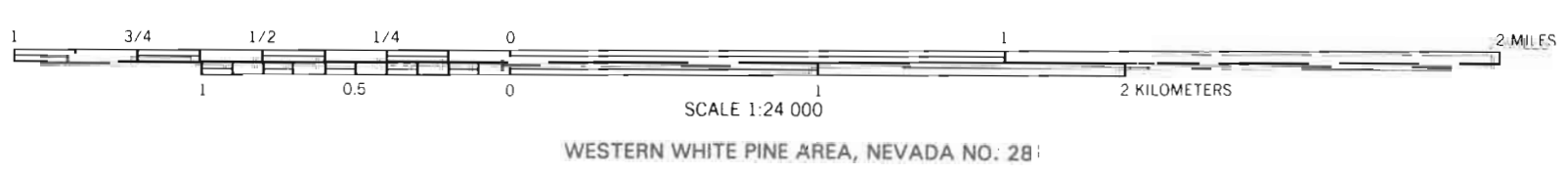


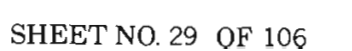
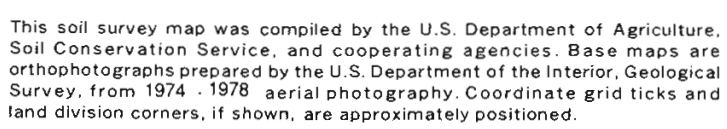
WESTERN WHITE PINE AREA, NEVADA NO. 27

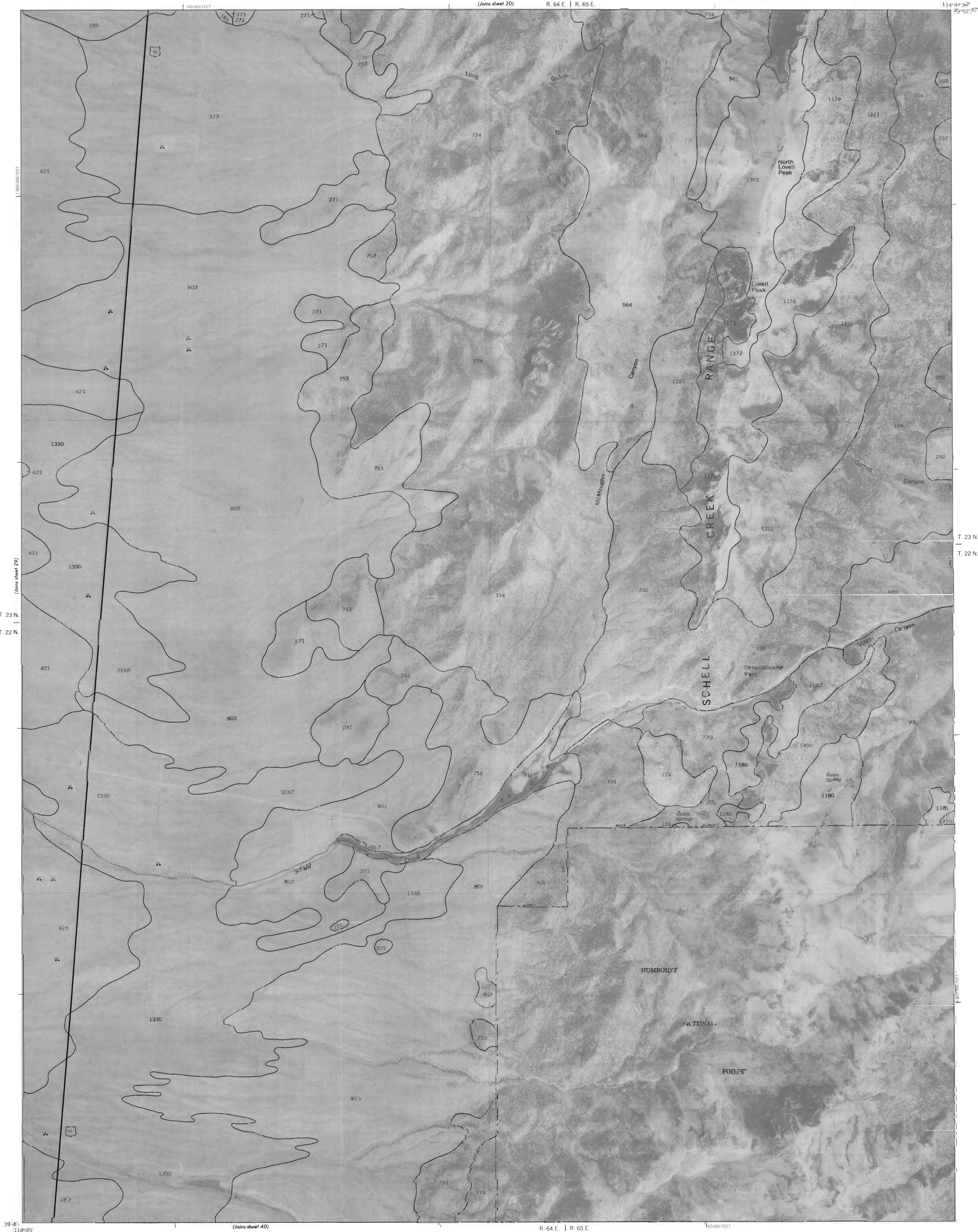




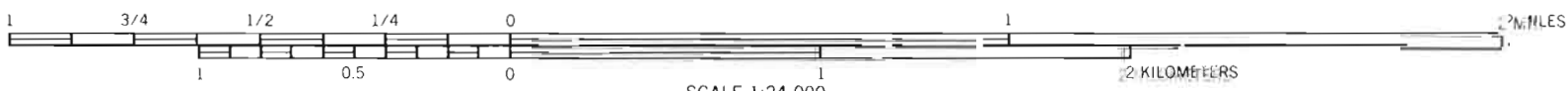
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.







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WESTERN WHITE PINE AREA, NEVADA NO. 30



R. 54 E. | R. 55 E.

115°45'
39°45'

T. 22 N.
T. 21 N.

(Joins sheet 32)

T. 21 N.
T. 20 N.

(Joins sheet 41)

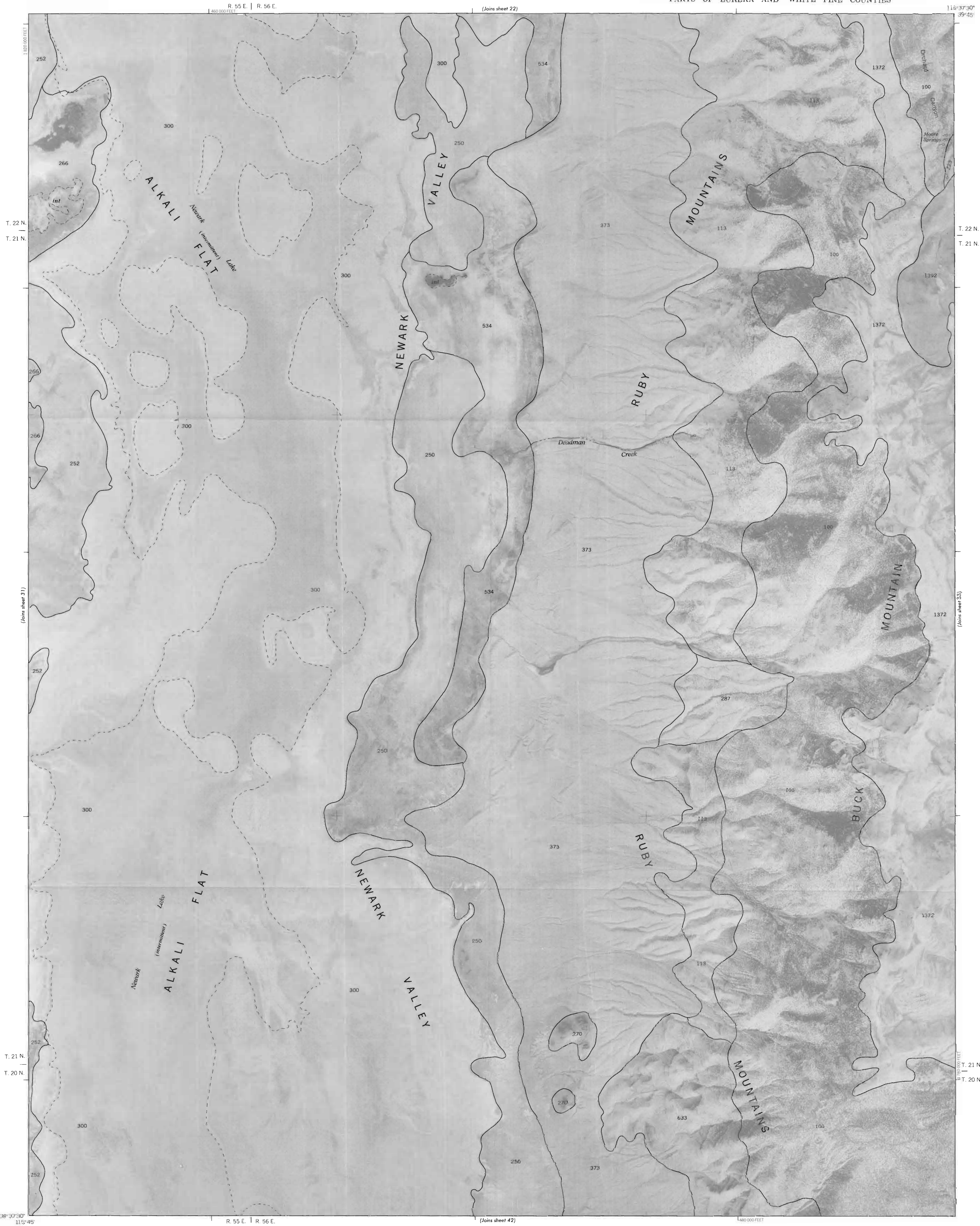
R. 54 E. | R. 55 E.



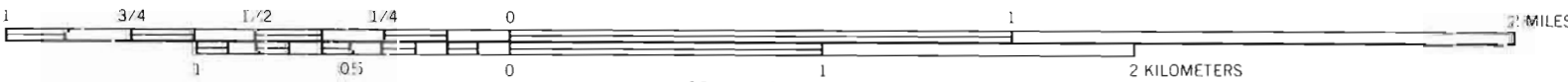
SCALE 1:24 000
WESTERN WHITE PINE AREA, NEVADA, NO. 31



This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1979 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA, NO. 32

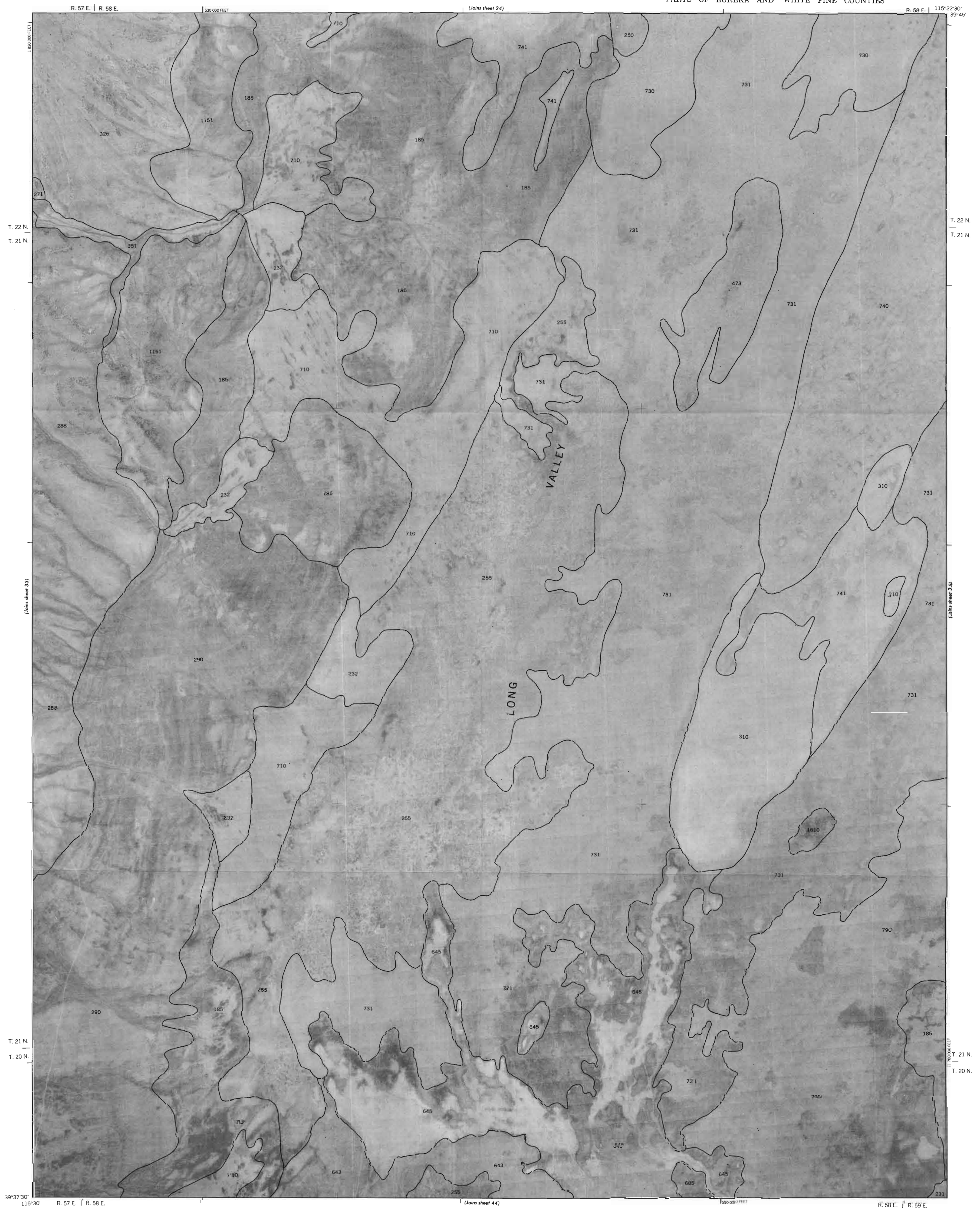


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



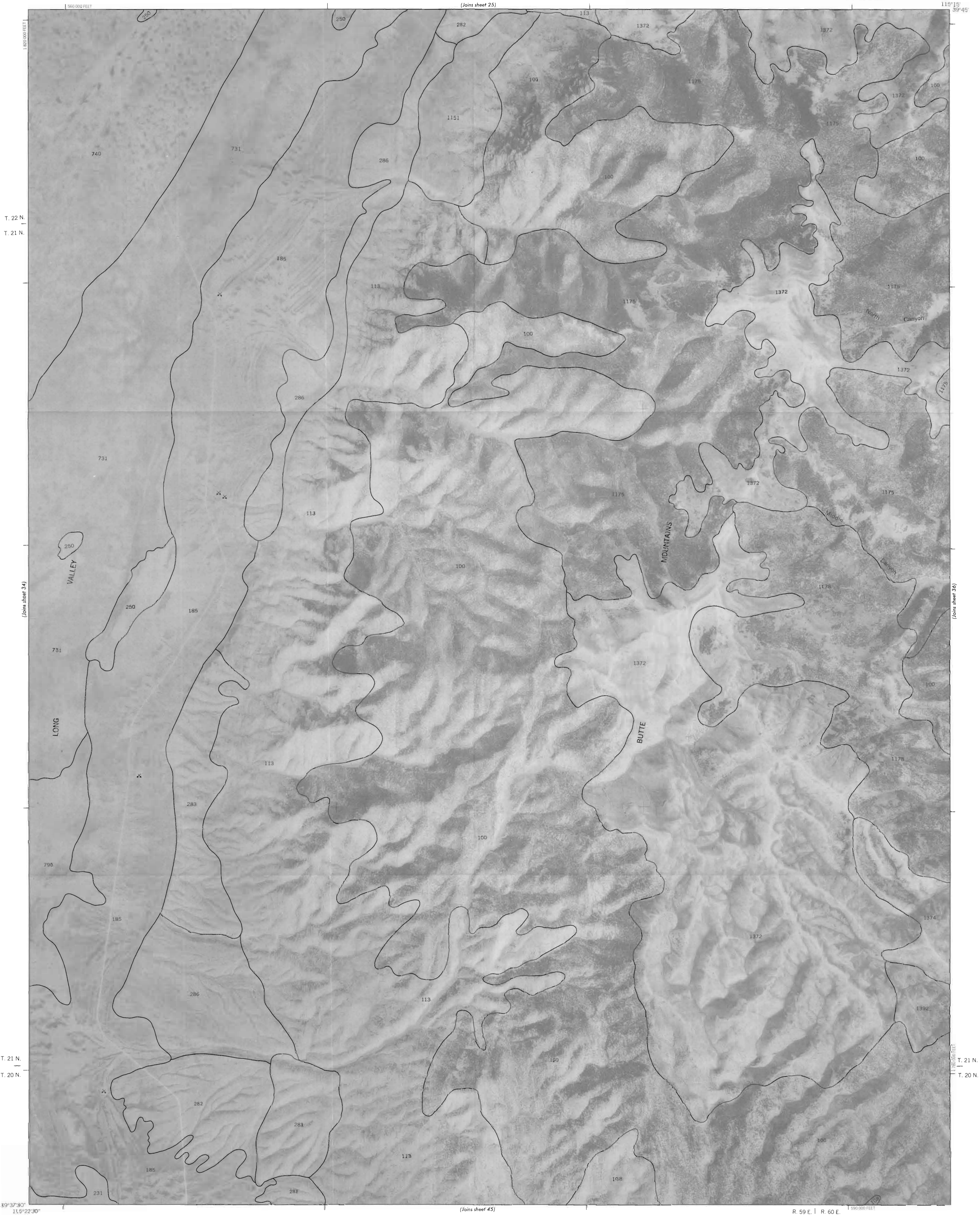
WESTERN WHITE PINE AREA, NEVADA NO. 33



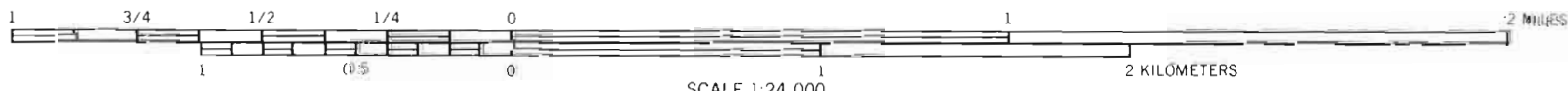


WESTERN WHITE PINE AREA, NEVADA NO. 34





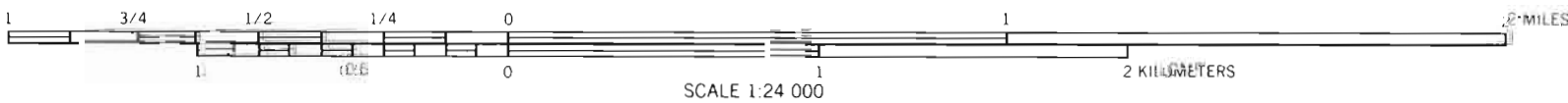
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA, NO. 35

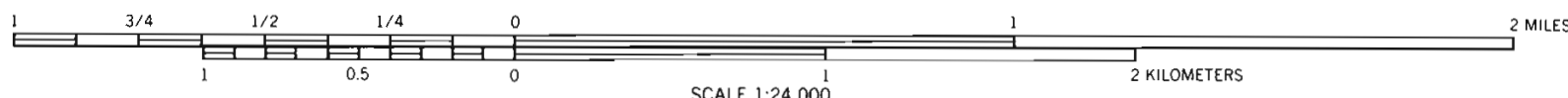


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



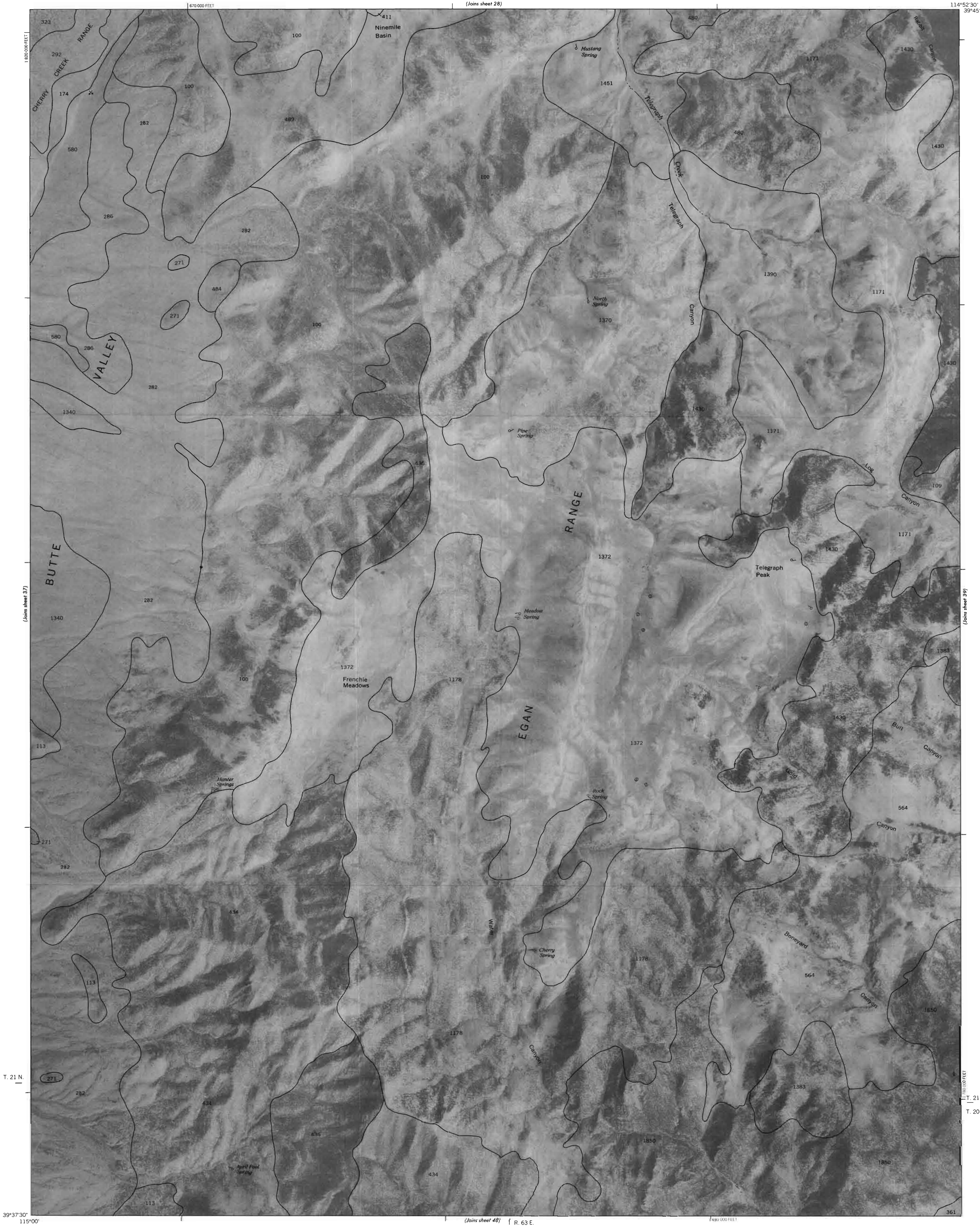


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

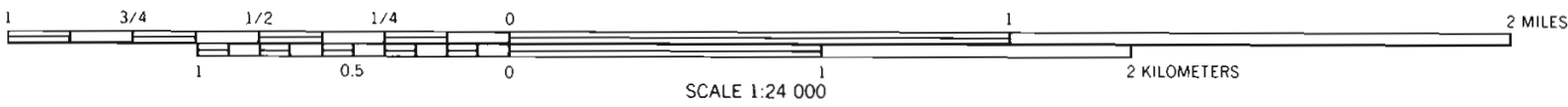


WESTERN WHITE PINE AREA, NEVADA NO. 37





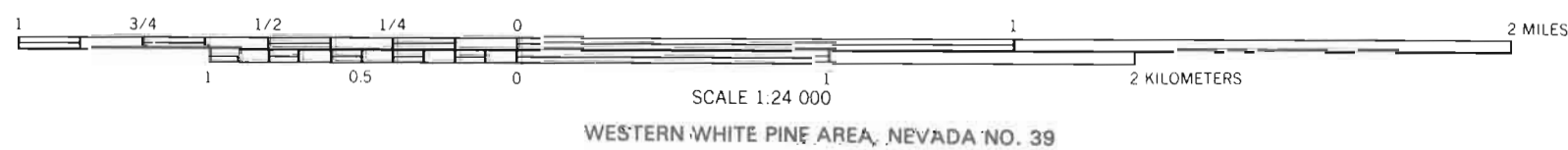
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 38

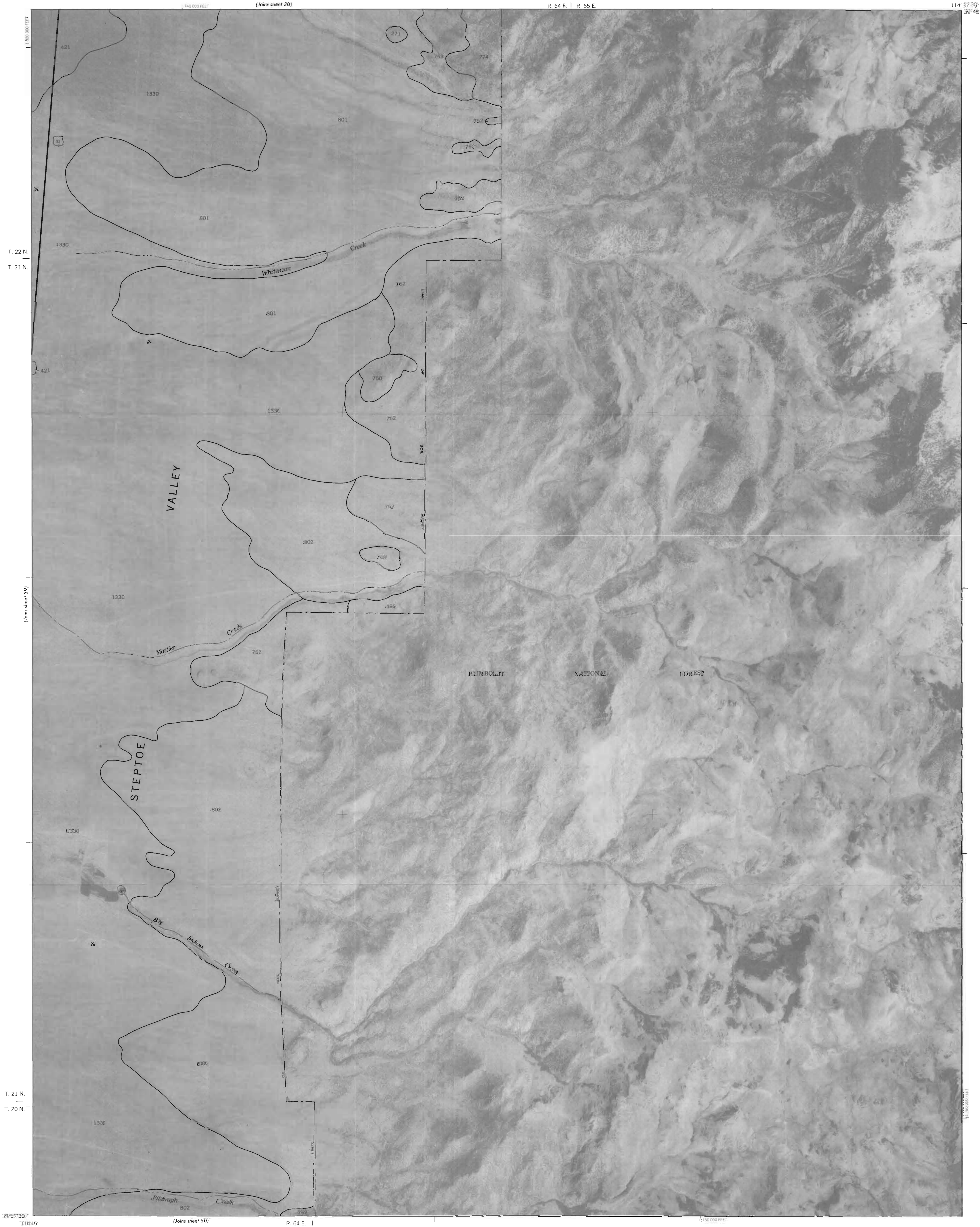


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

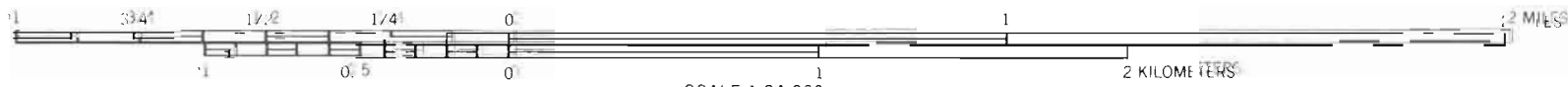


SCALE 1:24 000
WESTERN WHITE PINE AREA, NEVADA NO. 39

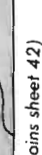




This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

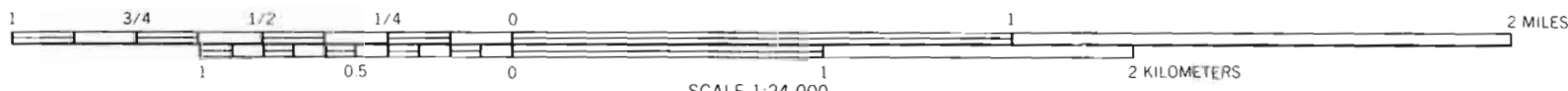


WESTERN WHITE PINE AREA, NEVADA, NO. 40





This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

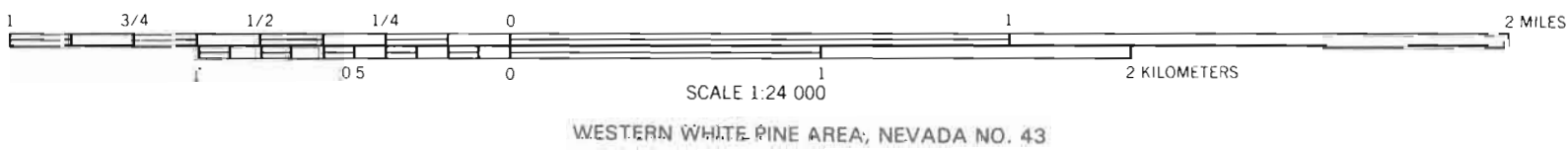


SCALE 1:24 000
WESTERN WHITE PINE AREA, NEVADA NO. 42





This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



SUNSHINE WELL QUADRANGLE
SHEET NO. 44
SOIL SURVEY OF WESTERN WHITE PINE COUNTY AREA, NEVADA,
PARTS OF EUREKA AND WHITE PINE COUNTIES

R. 57 E. | R. 58 E.

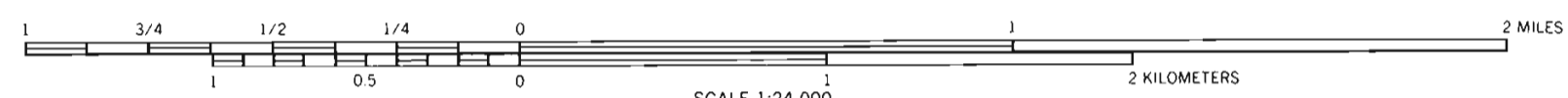
| 530 000 FEET

(Joins sheet 34)

R. 58 E. | R. 59 E. 115°22'30"



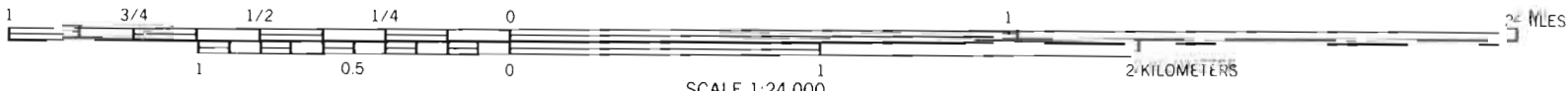
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 44



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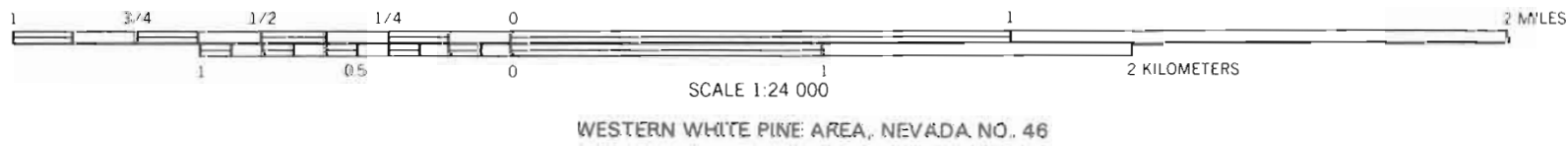


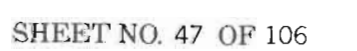
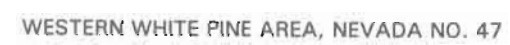
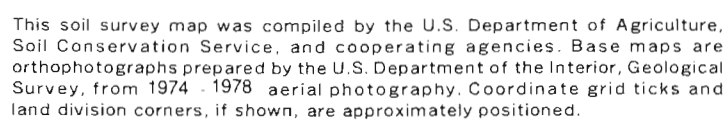
WESTERN WHITE PINE AREA, NEVADA, NO. 45

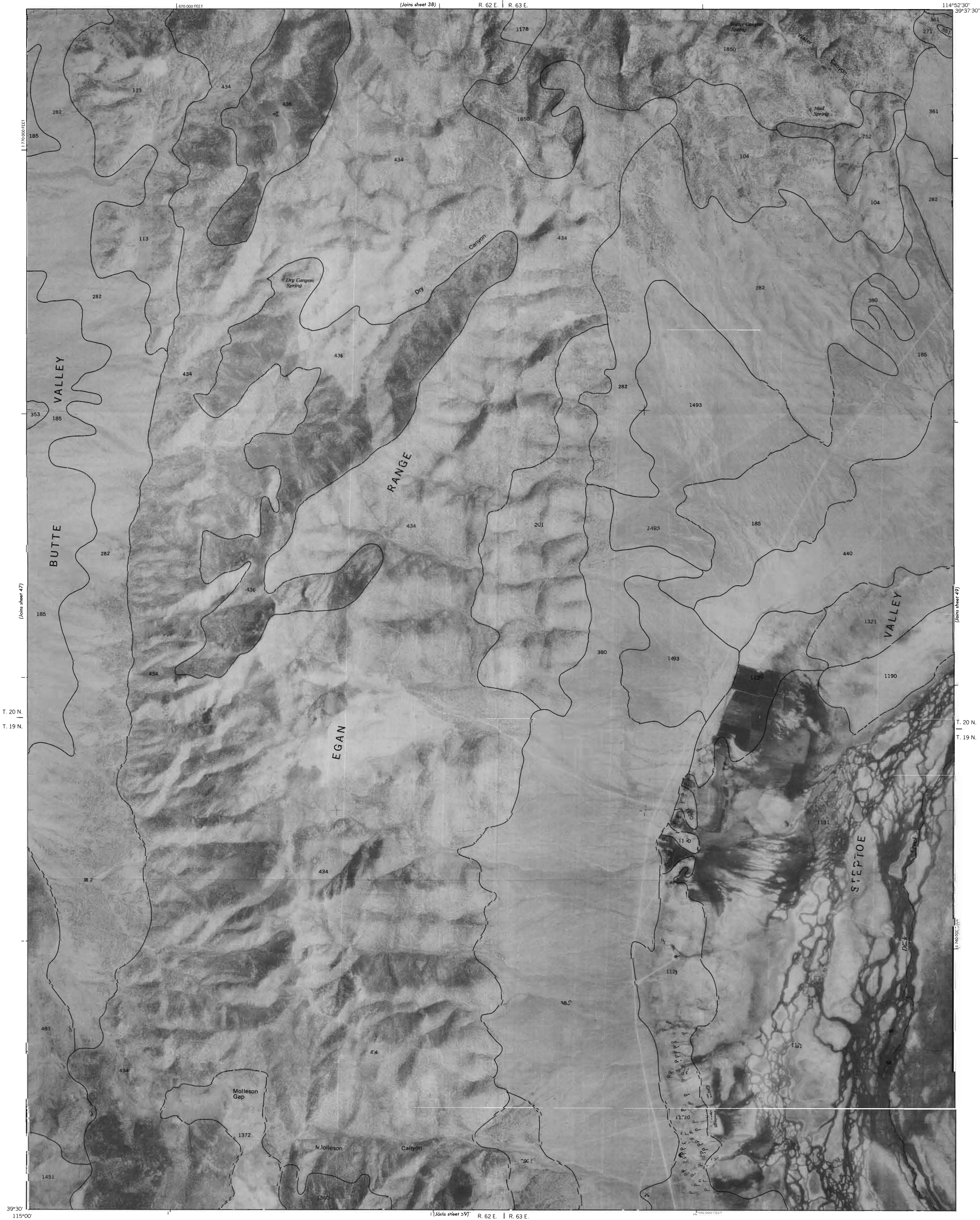




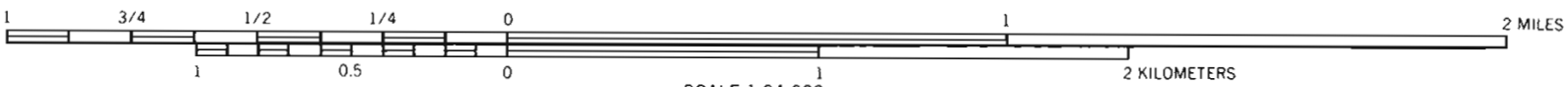
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.





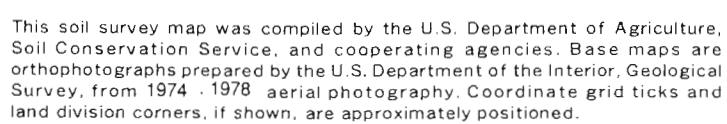


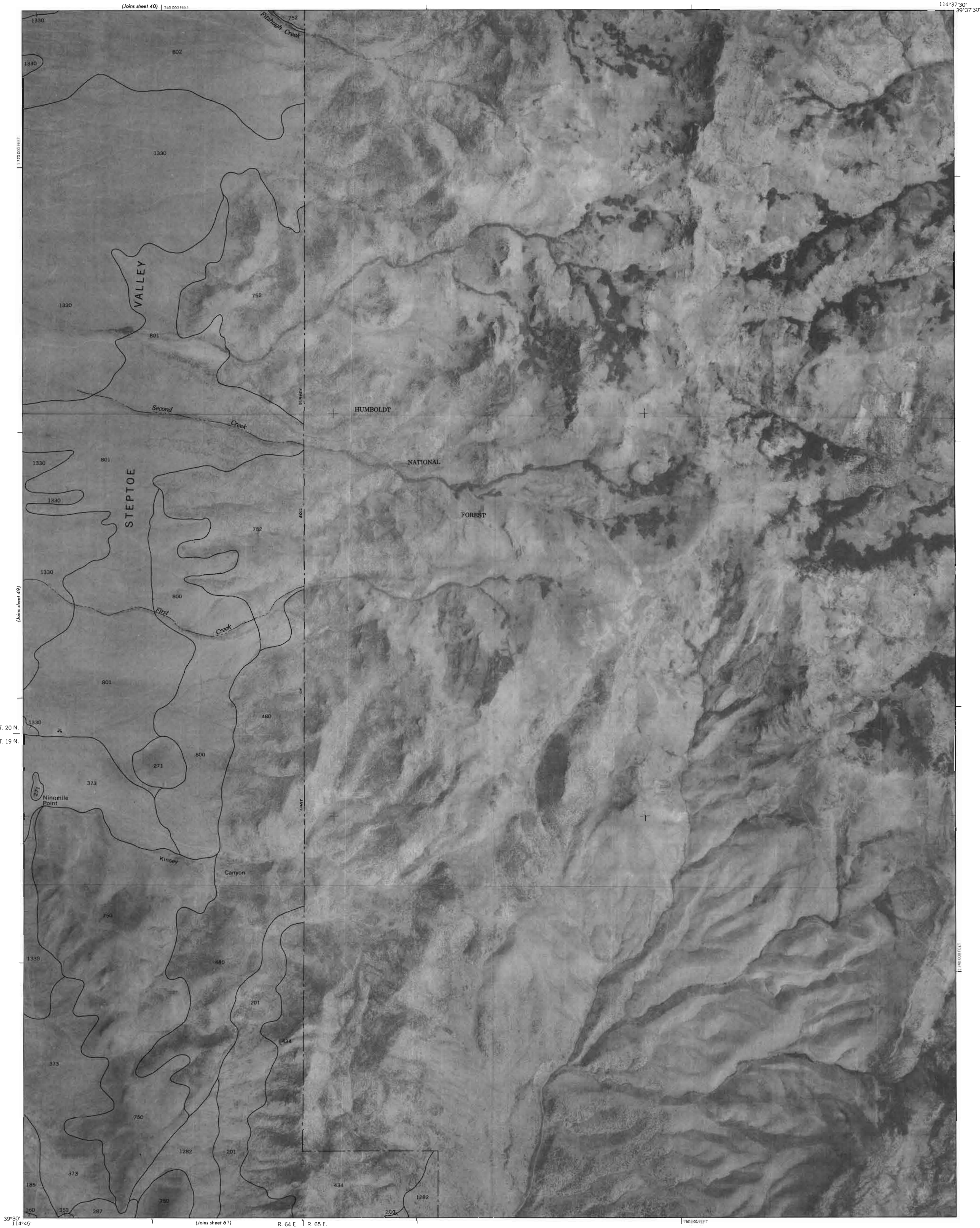
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



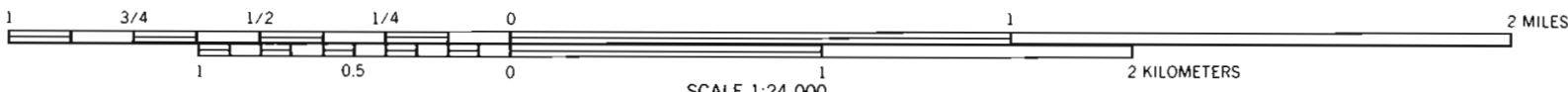
SCALE 1:24 000
WESTERN WHITE PINE AREA, NEVADA NO. 48







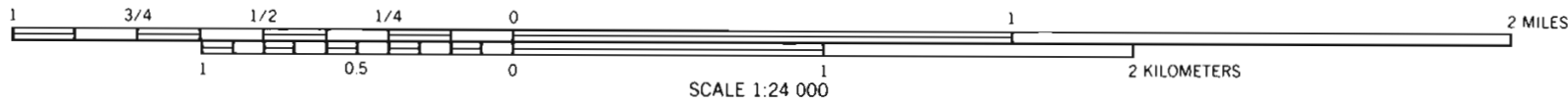
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 50



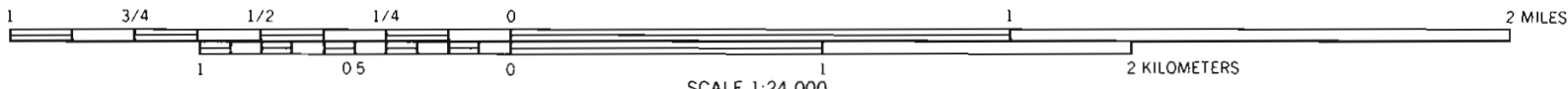
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 51



This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

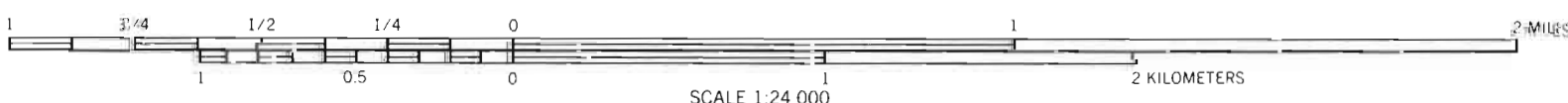


WESTERN WHITE PINE AREA, NEVADA NO. 52



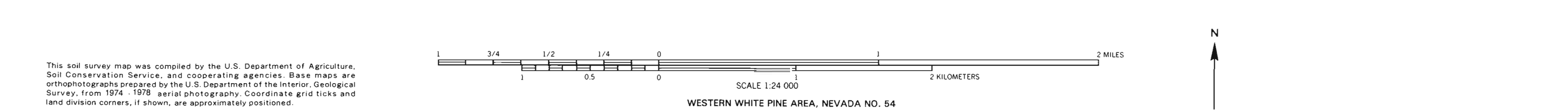


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



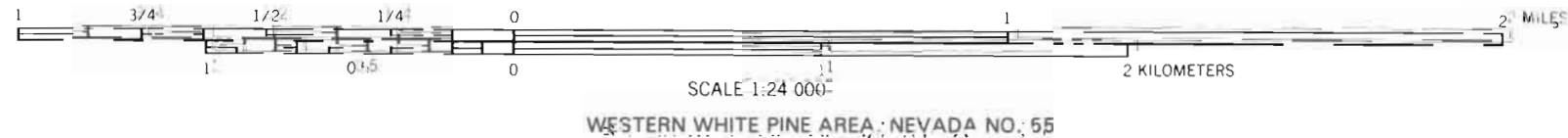
WESTERN WHITE PINE AREA, NEVADA NO. 53





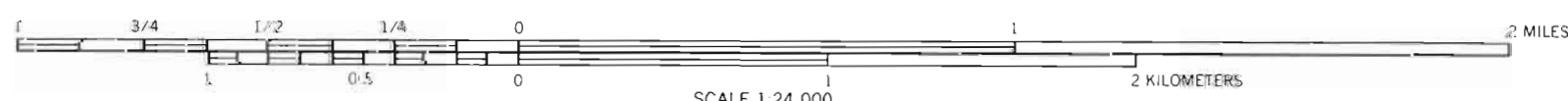


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.





This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



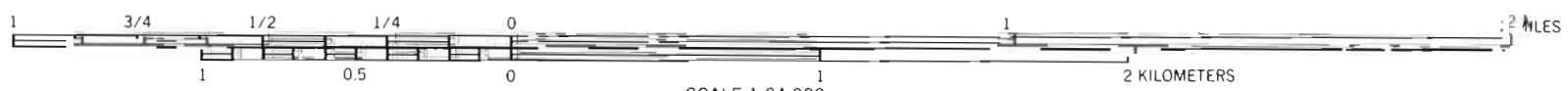
SCALE 1:24 000

WESTERN WHITE PINE AREA, NEVADA NO. 56

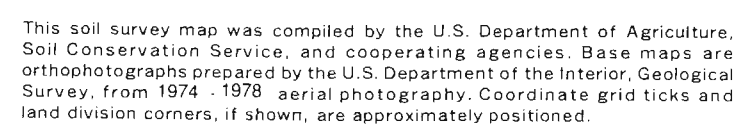


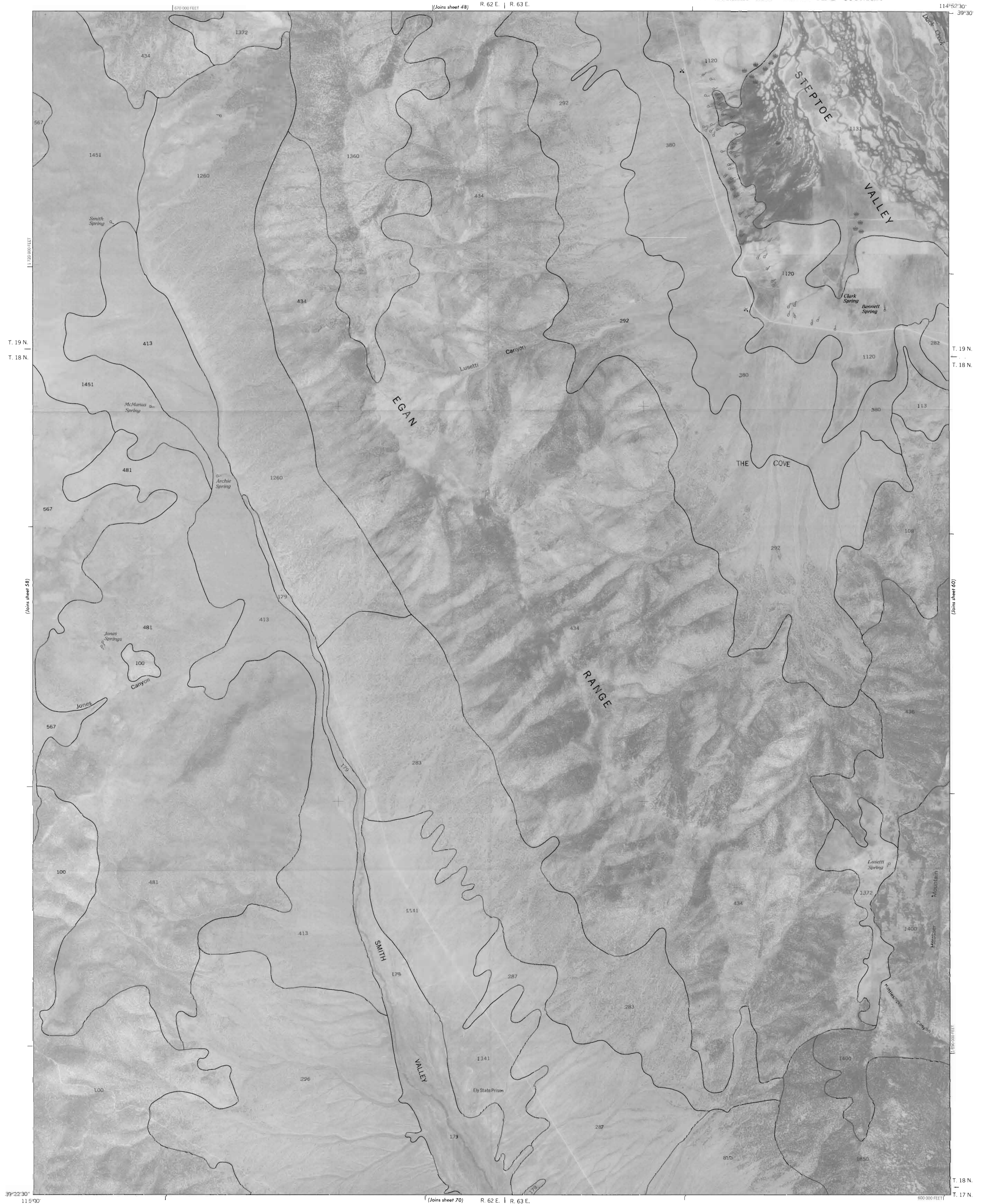


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



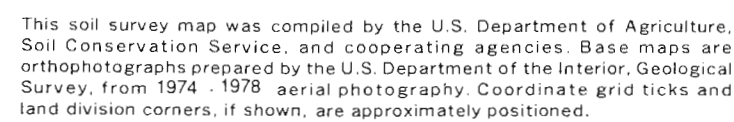
SCALE 1:24 000
WESTERN WHITE PINE AREA, NEVADA NO. 57

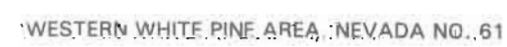
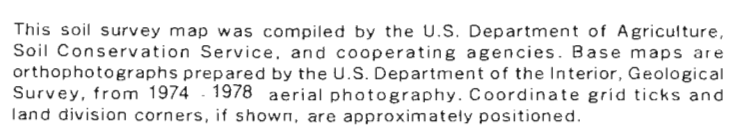




SCALE 1:24 000

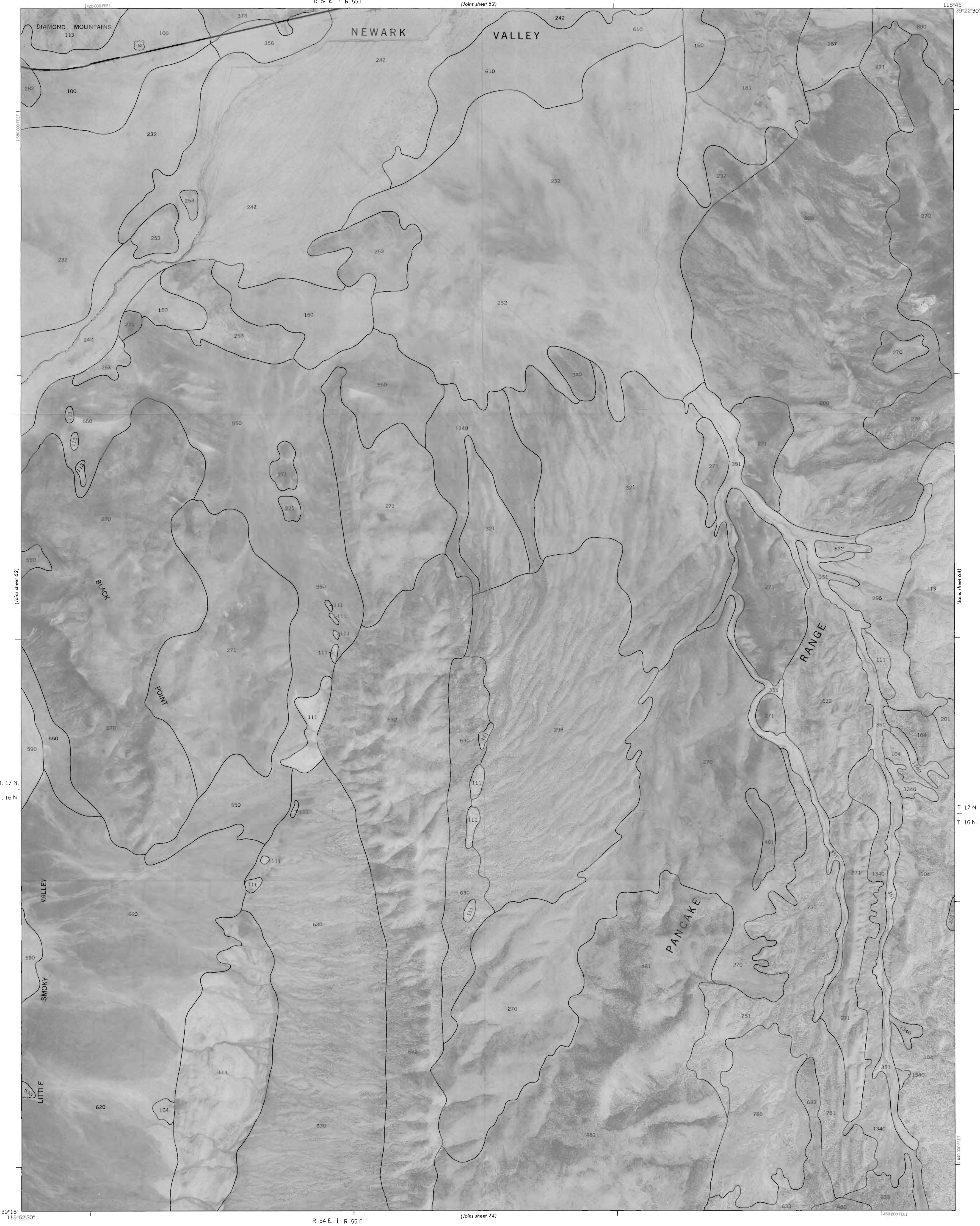
WESTERN WHITE PINE AREA, NEVADA 'NO. 59



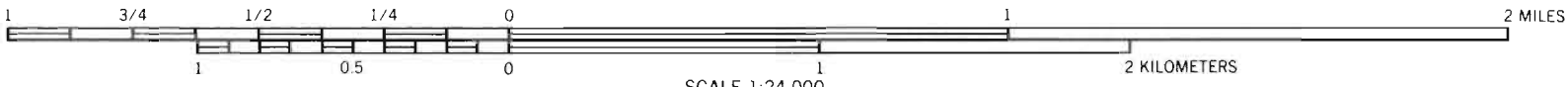




WESTERN WHITE PINE AREA, NEVADA NO. 62



This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

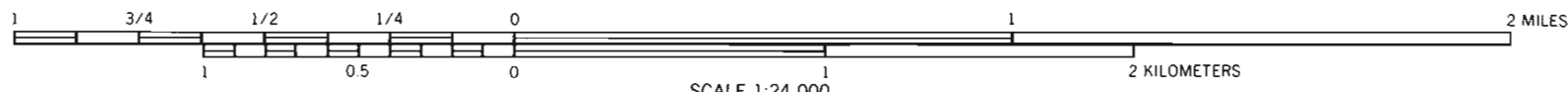


WESTERN WHITE PINE AREA, NEVADA NO. 63



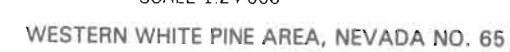
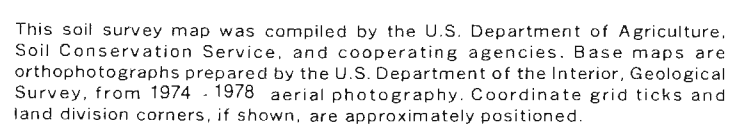


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



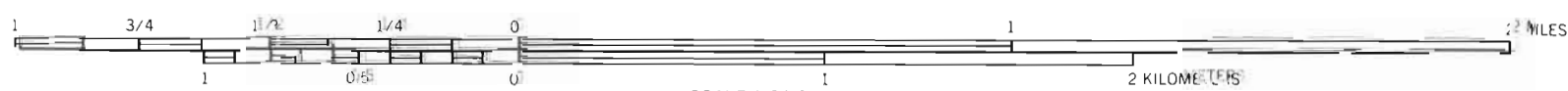
WESTERN WHITE PINE AREA, NEVADA NO. 64





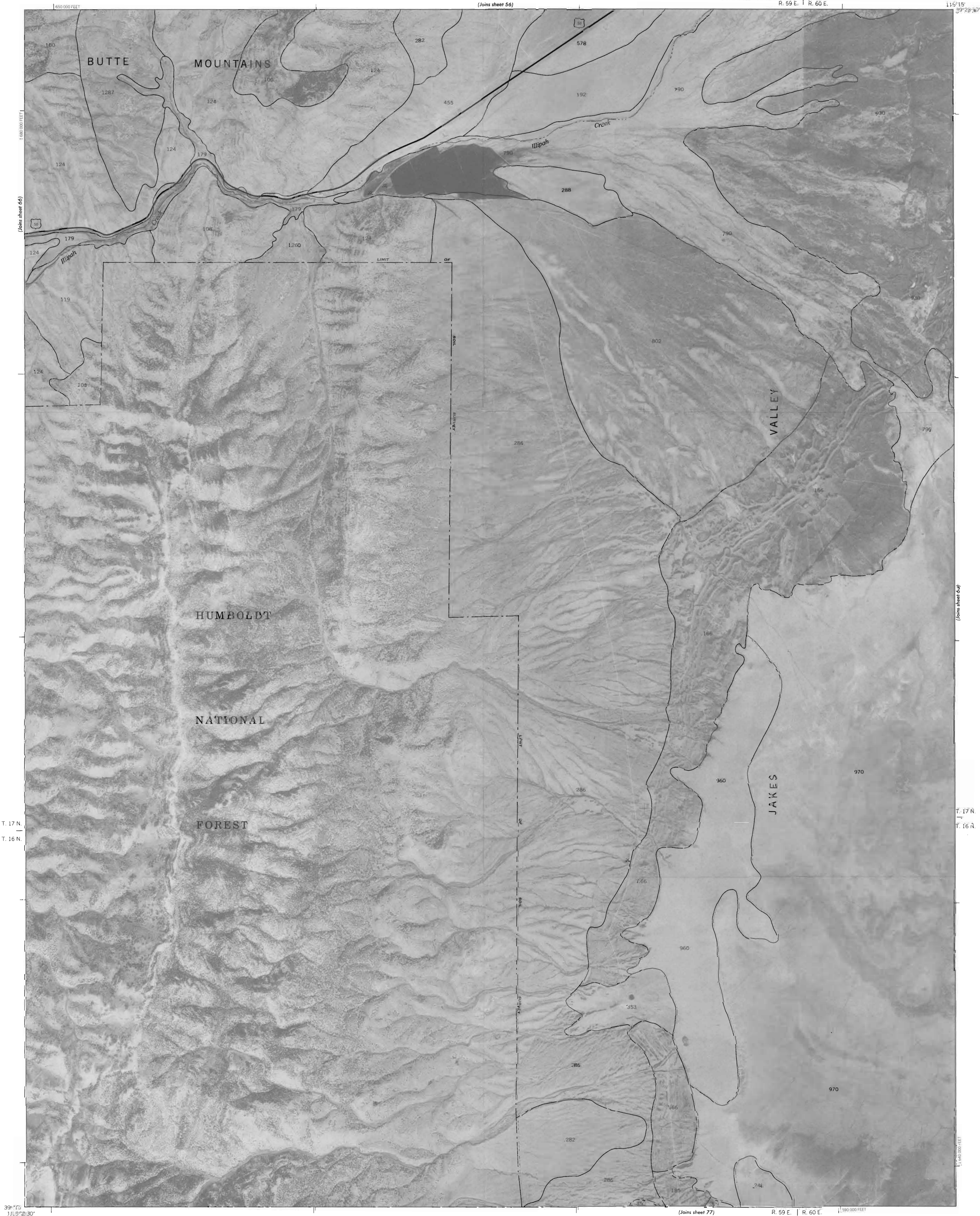


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

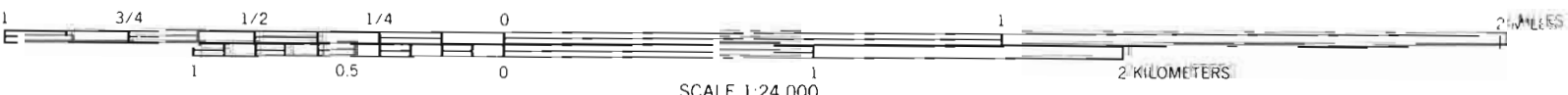


SCALE 1:24 000
WESTERN WHITE PINE AREA, NEVADA, NO. 66



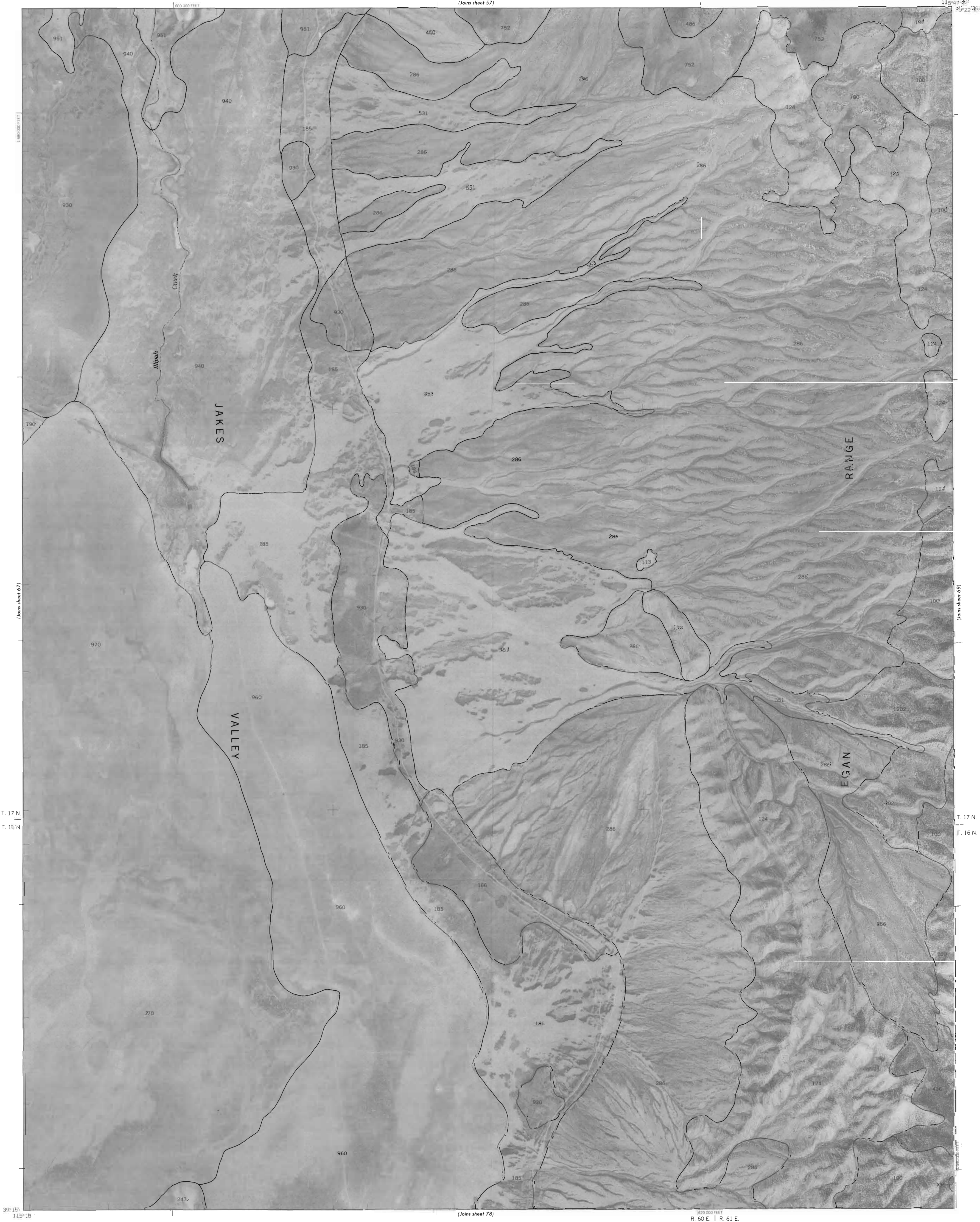


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

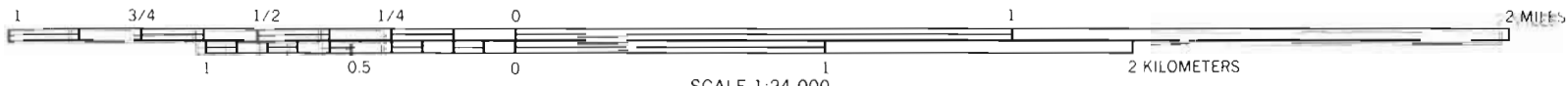


WESTERN WHITE PINE AREA, NEVADA NO. 67





This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

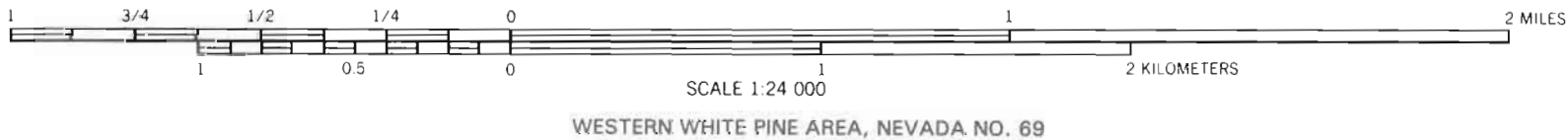


WESTERN WHITE PINE AREA, NEVADA NO. 68



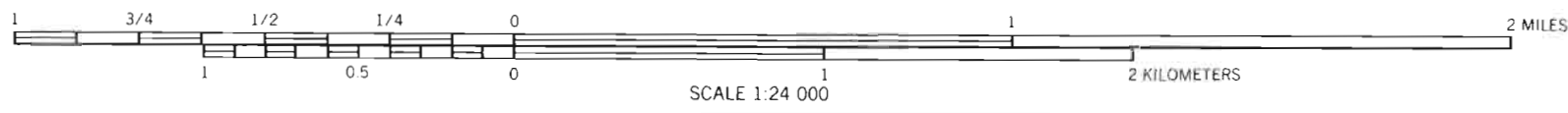


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

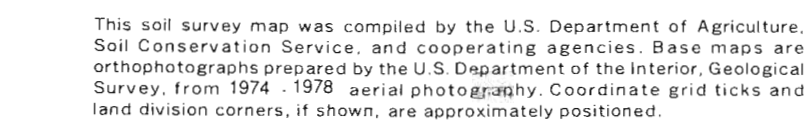




This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

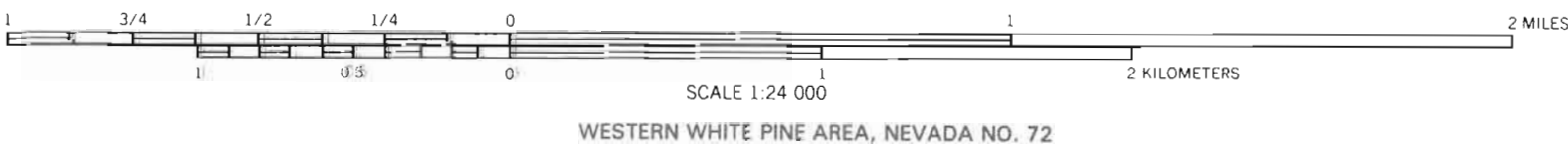


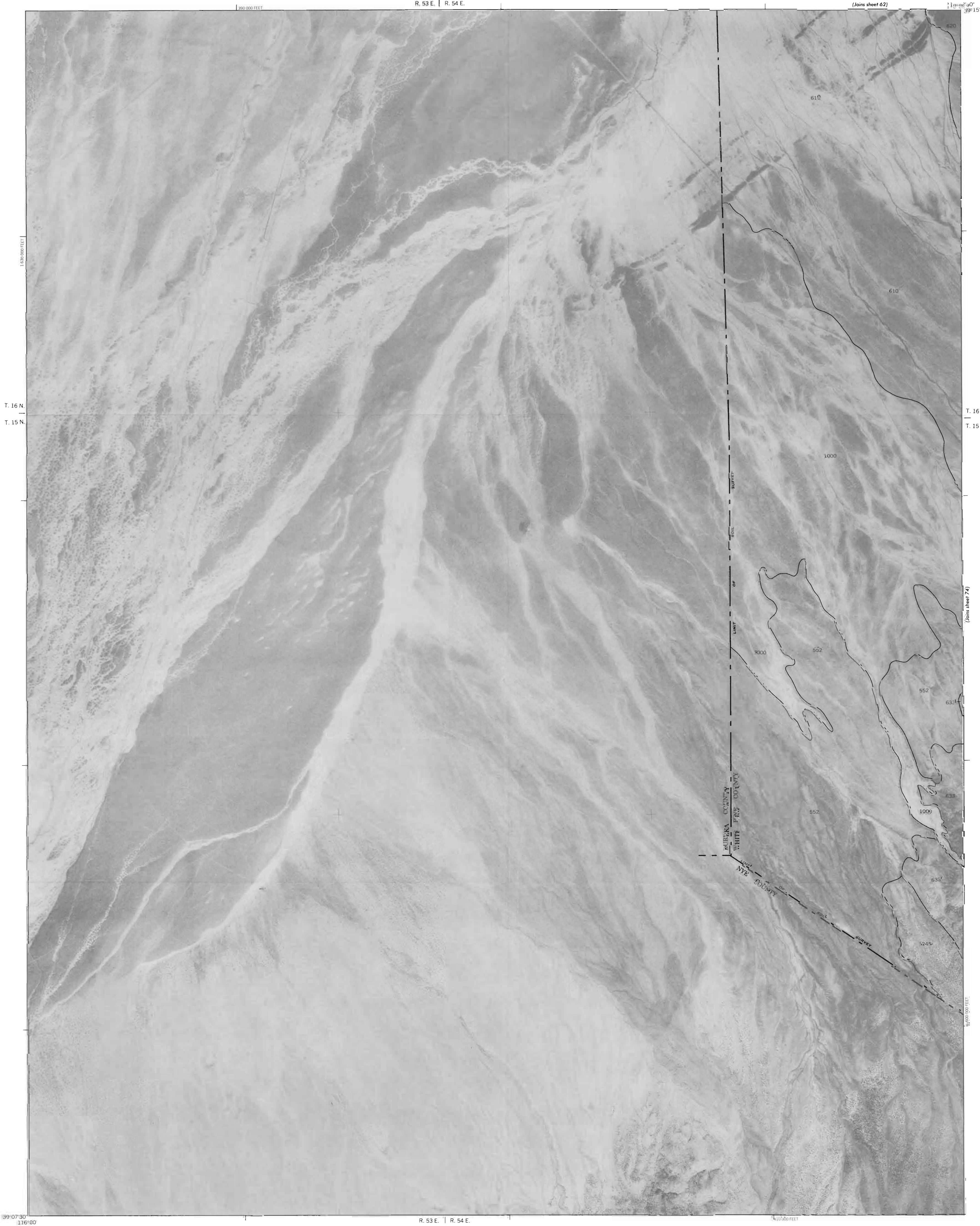
WESTERN WHITE PINE AREA, NEVADA NO. 70



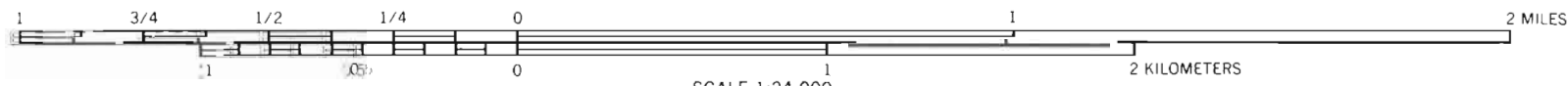


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



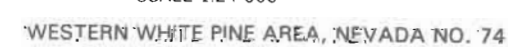
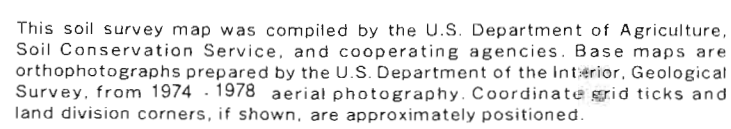


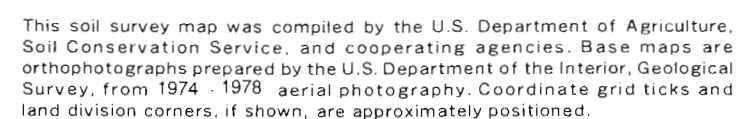
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA; NO: 73

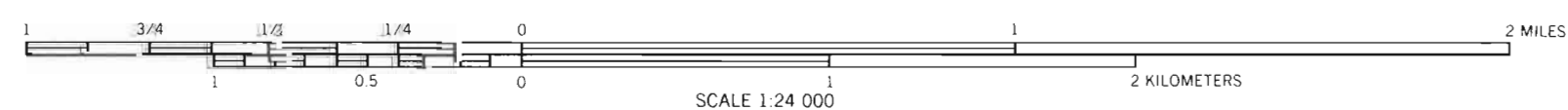








This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO: 76

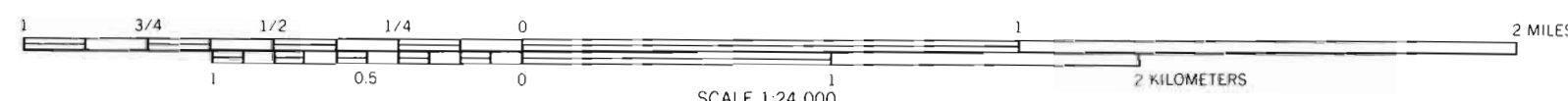


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA, NO. 77

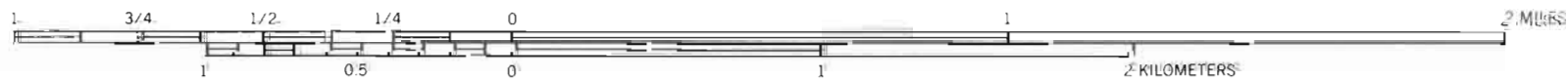




WESTERN WHITE PINE AREA, NEVADA NO. 78

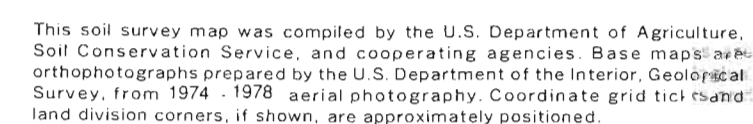


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps and orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



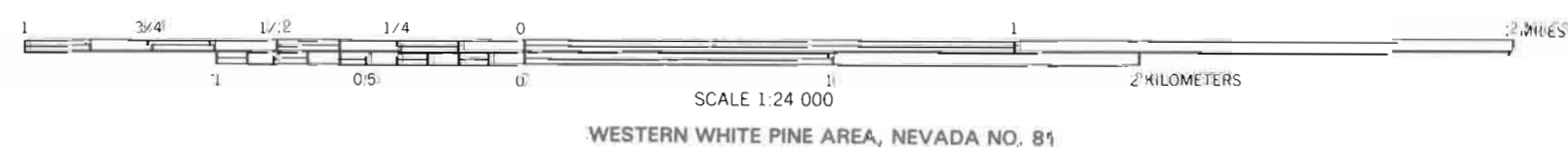
WESTERN WHITE PINE AREA, NEVADA NO. 79







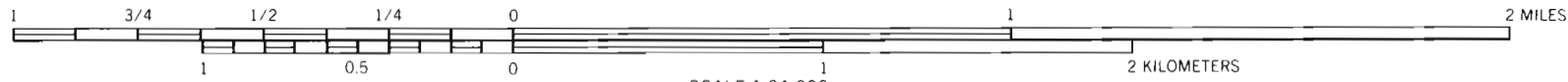
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 81



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WESTERN WHITE PINE AREA, NEVADA NO. 82



This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO: 83





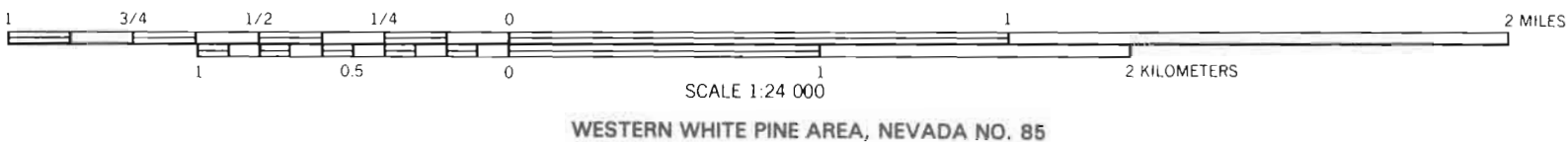
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 84

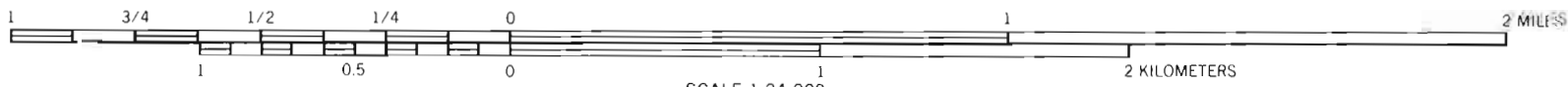


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



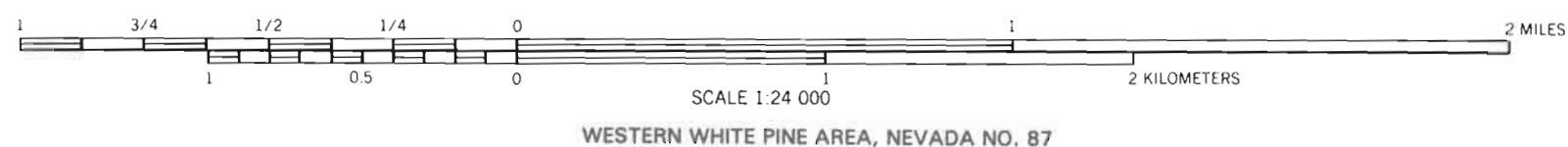
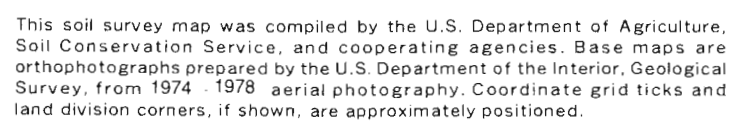


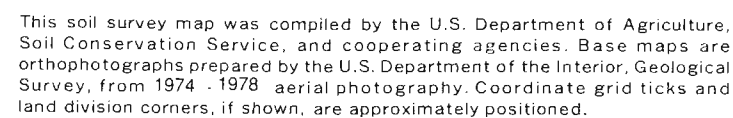
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 86

N

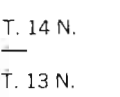




114°52'36"
39°07'30"

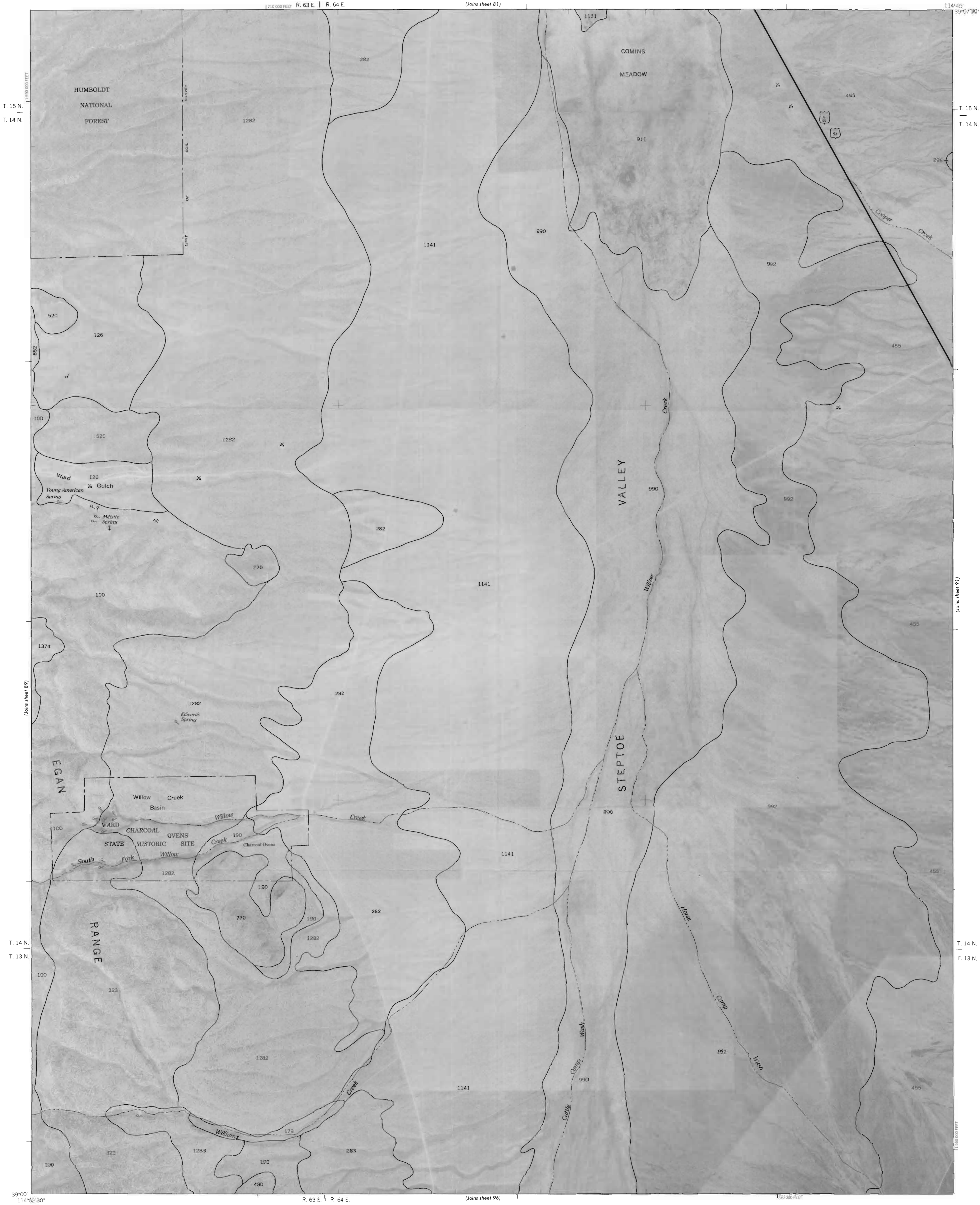
T. 14 N.

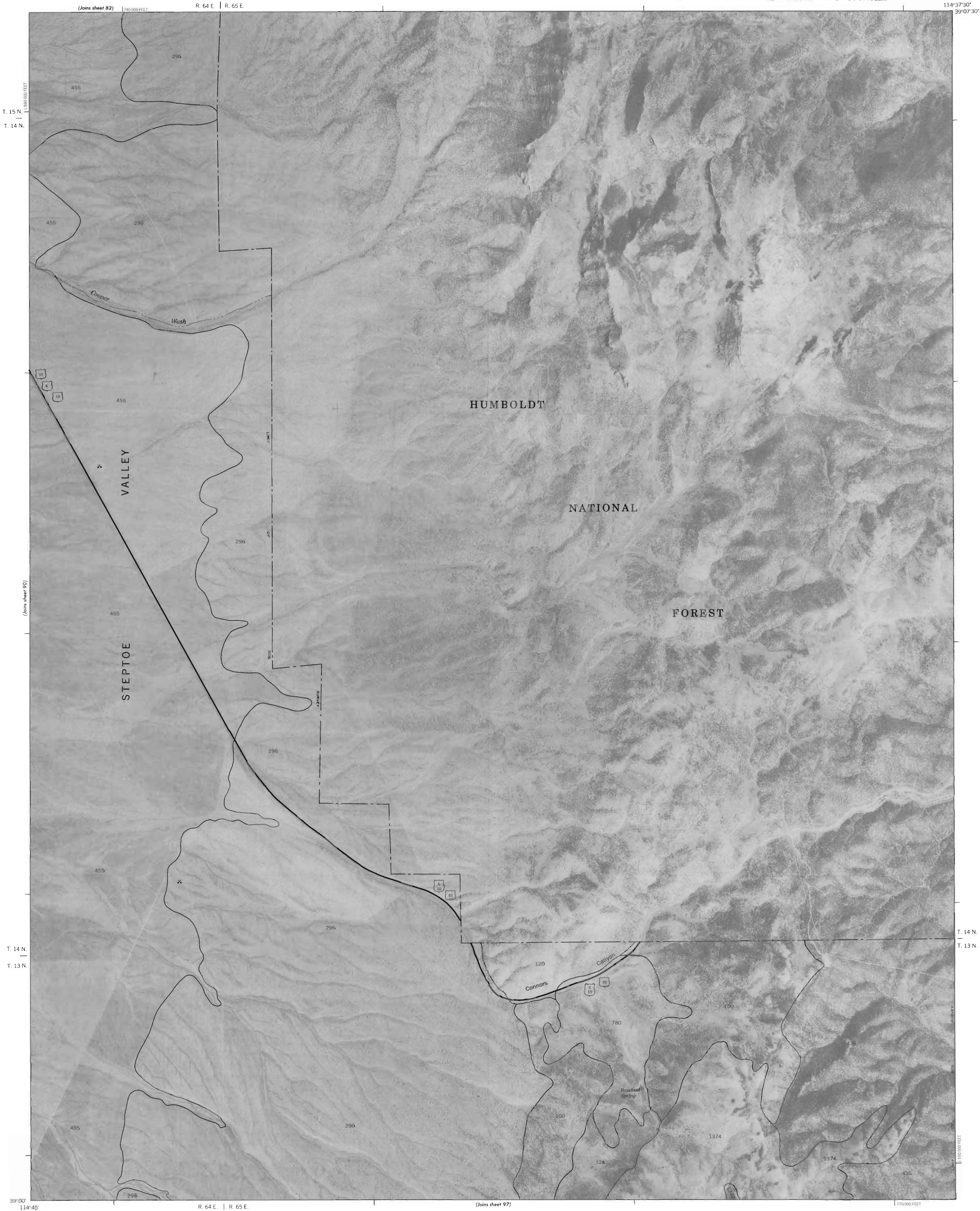
T. 14 N.



WESTERN WHITE PINE AREA, NEVADA NO. 89







This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974-1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 91

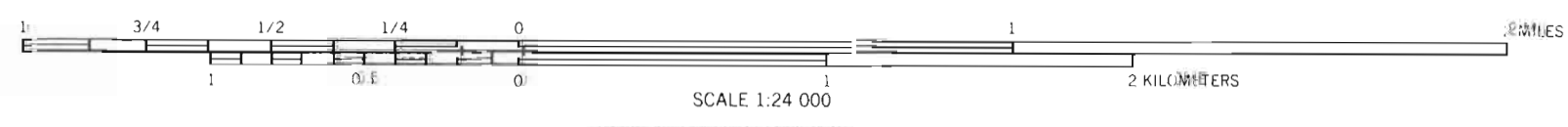




38° 52' 30" N
115° 37' 30" W

115° 30' 00" W

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



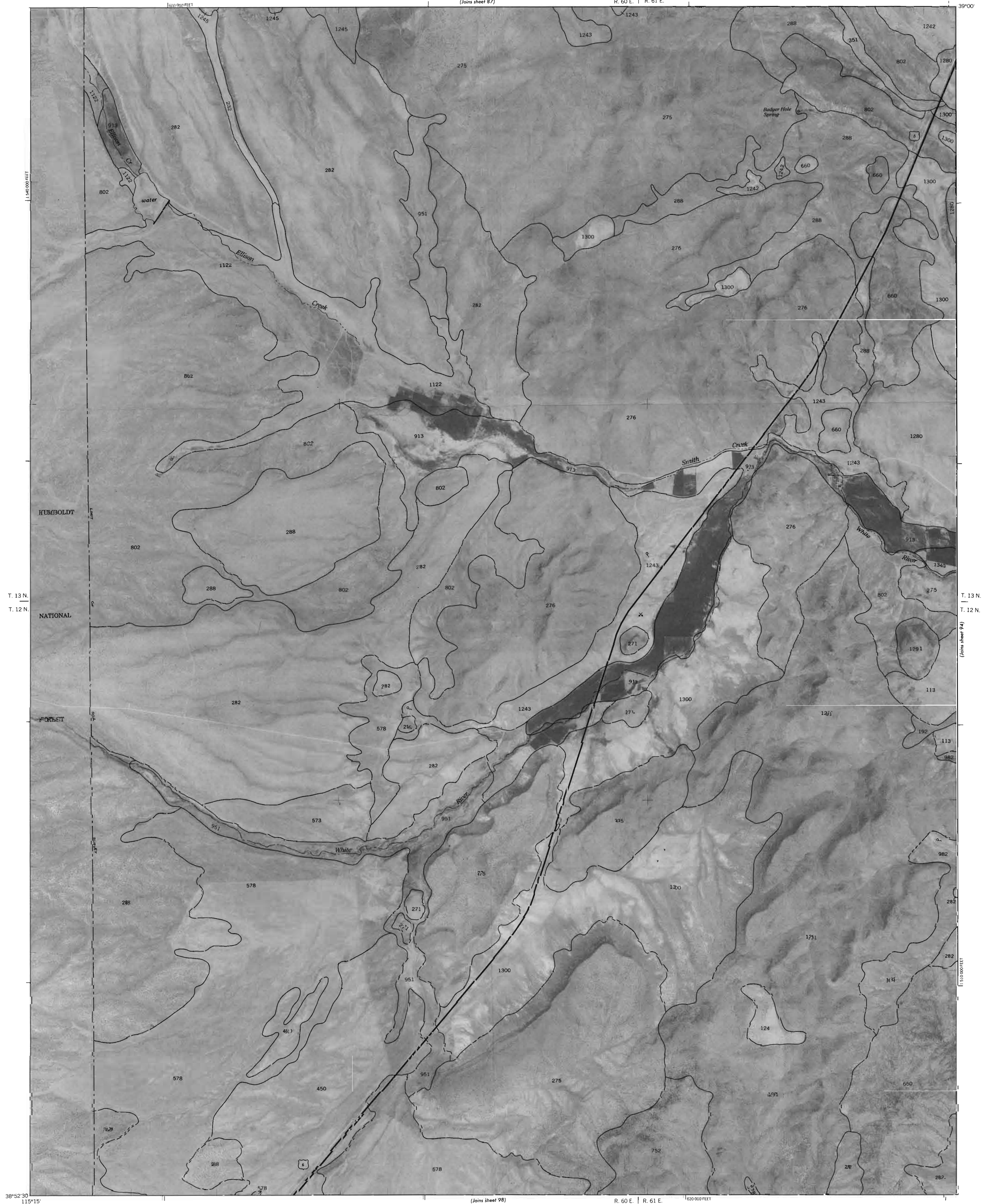
SCALE 1:24,000
WESTERN WHITE PINE AREA, NEVADA NO. 92



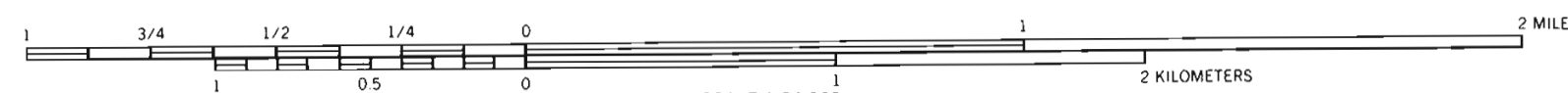
R. 60 E. | R. 61 E.

115°07'30"

39°00'

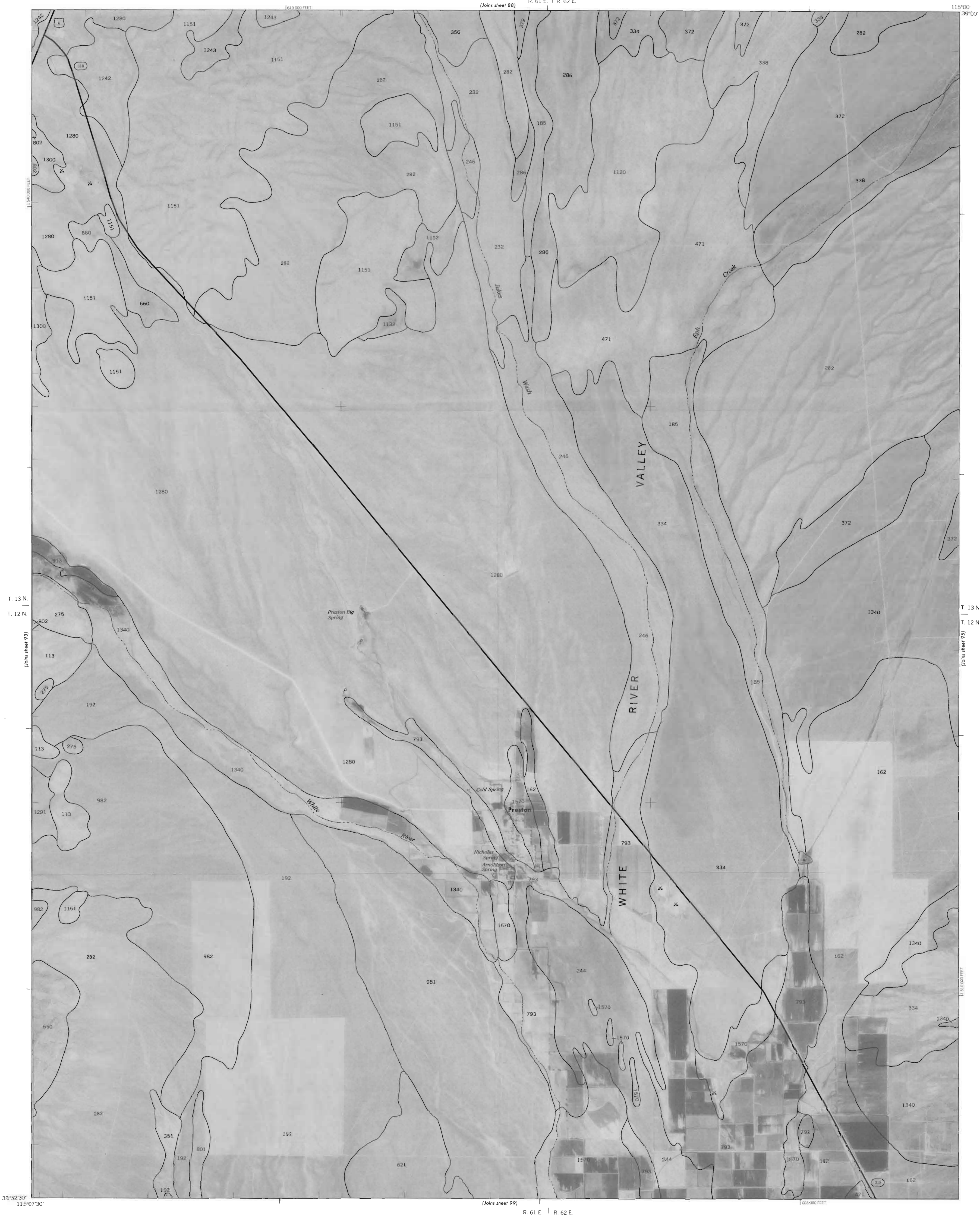


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

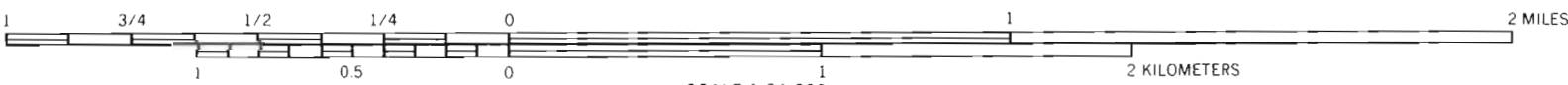


WESTERN WHITE PINE AREA, NEVADA NO. 93

▶

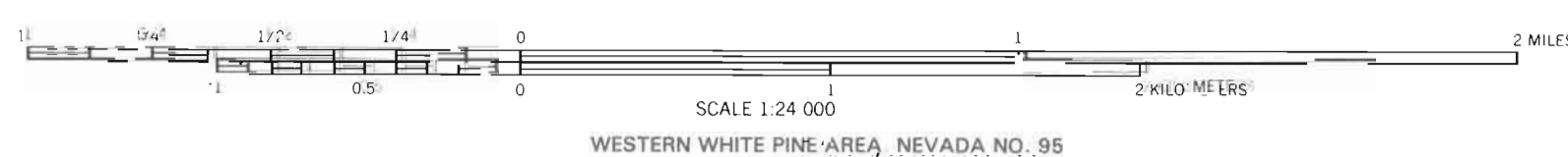


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 94

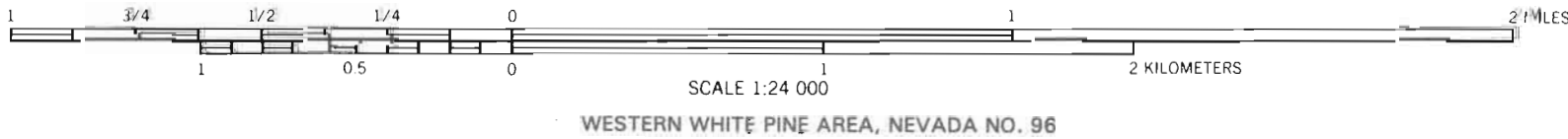




SHEET NO. 95 OF 106

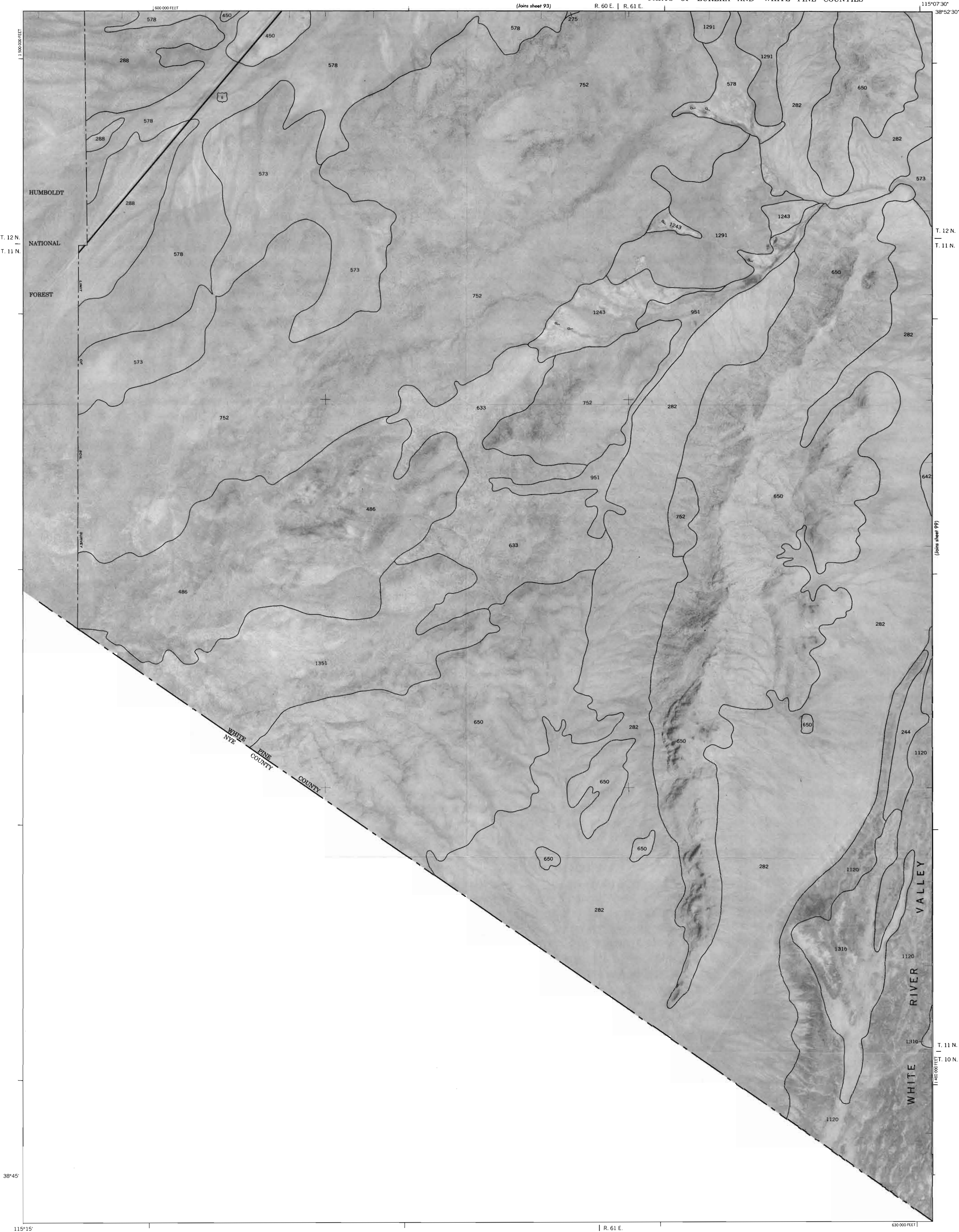


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



SCALE 1:24 000
WESTERN WHITE PINE AREA, NEVADA NO. 96

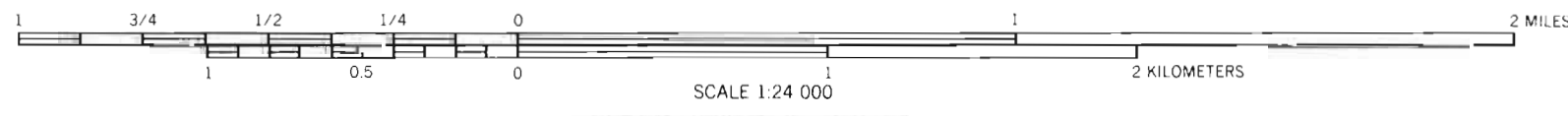




This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

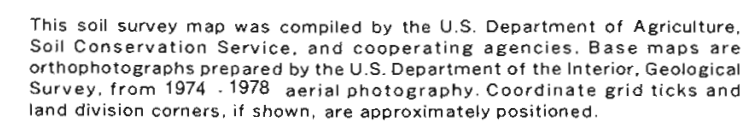


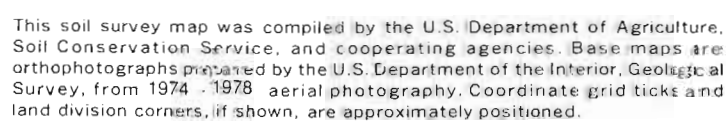
This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1976 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

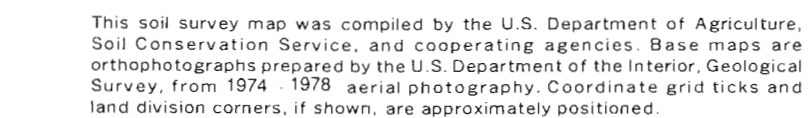


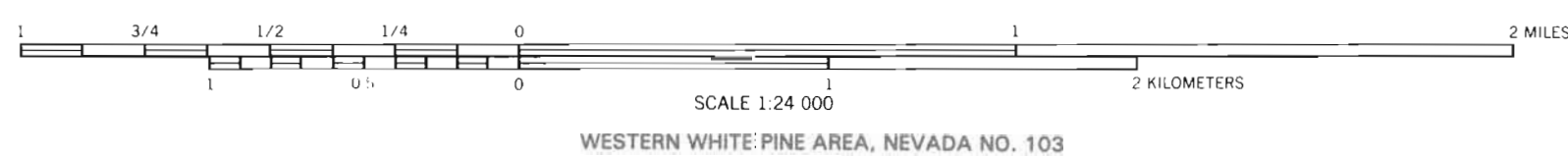
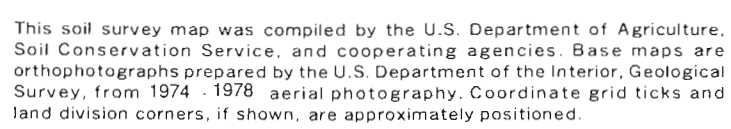
WESTERN WHITE PINE AREA, NEVADA NO. 99

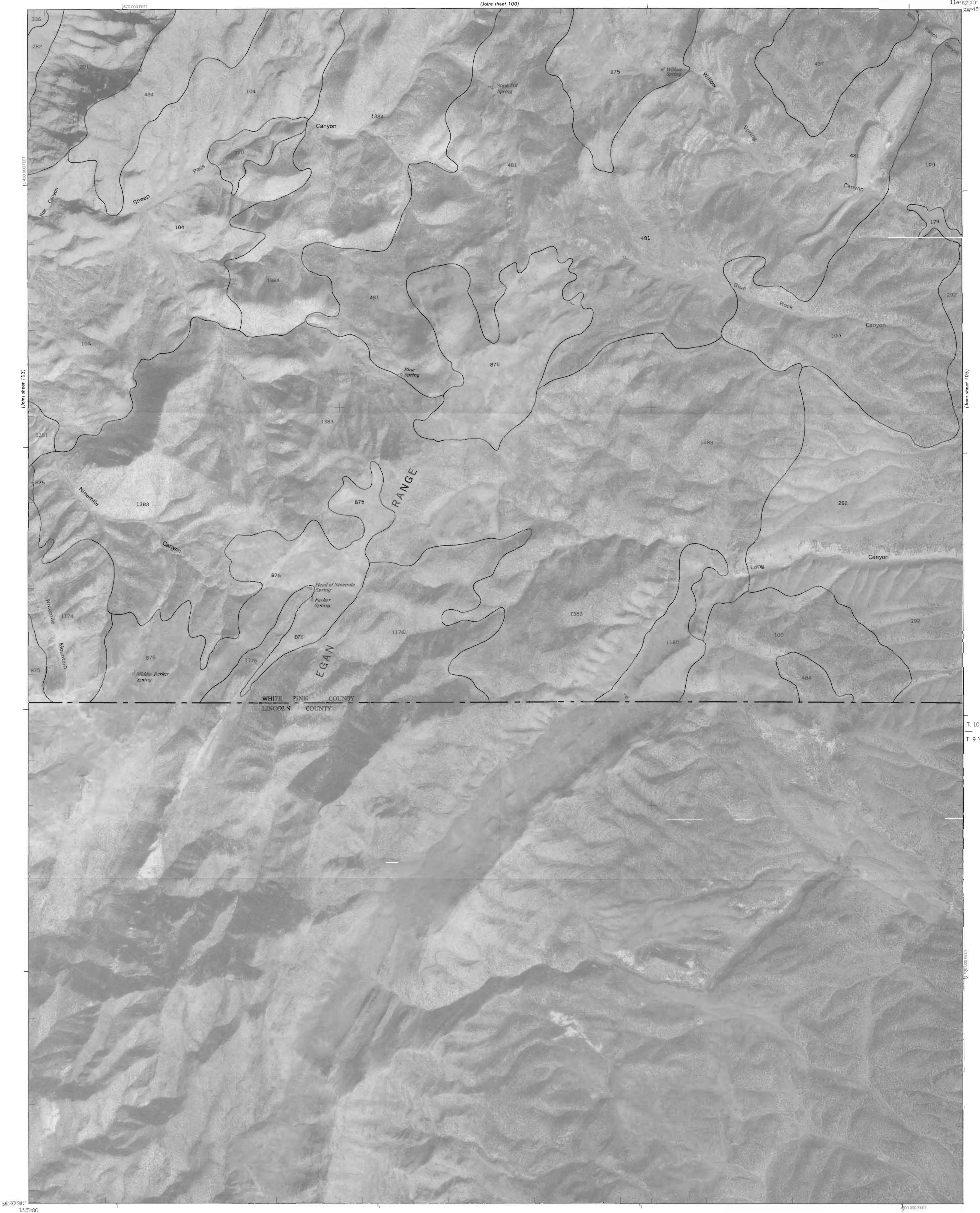




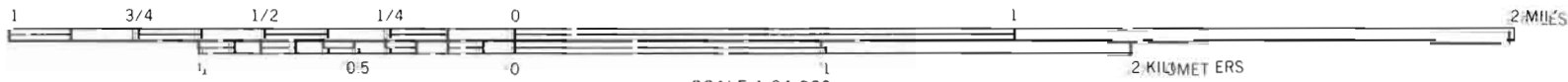






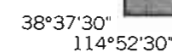


This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 104



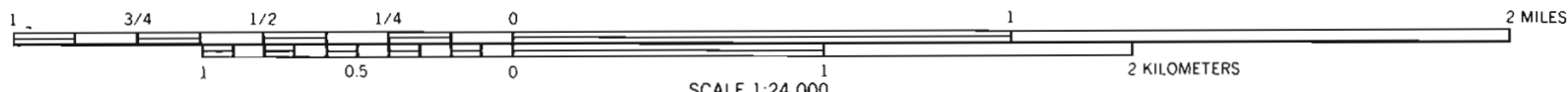


WESTERN WHITE PINE AREA, NEVADA NO. 105





This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 - 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.



WESTERN WHITE PINE AREA, NEVADA NO. 106

